

THE  
MEDICAL EXAMINER,  
AND  
RECORD OF MEDICAL SCIENCE.

NEW SERIES.—NO. LXIII.—MARCH, 1850.

ORIGINAL COMMUNICATIONS.

*Case of Tubercular Meningitis, occurring at St. Joseph's Hospital.*  
Service of Dr. STILLÉ.

Catharine S., aged about 12 years, entered the hospital Oct., 1849. Catharine arrived in this country from Ireland, in Dec., 1848, with her parents and several younger children. Very soon afterwards both father and mother died from the effects, it is supposed, of a long voyage and insufficient food. Catharine was their only nurse, and watched them day and night with a devotion and intelligence far beyond her years. She was completely exhausted by her labors, and at her mother's funeral, which she would not be prevented from attending, could only succeed in following the coffin by interrupted and persevering efforts. On returning home she fainted repeatedly. She was then taken into the employment of a benevolent lady, with whom she continued to live. She remained feeble, however, and complained of weakness in her limbs, and of a sense of tightness around her waist. Within the last month or two, her eyes gave her pain whenever she applied them to needlework, although no signs of inflammation were visible;

she suffered almost constantly from headache, and at times betrayed a degree of perverseness foreign to her natural disposition. About a week before entering the hospital she was attacked by spasmodic movements, with some wandering of the mind, and stupor, which were regarded by her physician as symptoms of hysteria, and treated accordingly. After her admission she lay with closed eyes, her brow somewhat corrugated, and her cheeks flushed. With much difficulty she could be roused, so as to answer questions by "yes" or "no," but immediately relapsed into stupor. The natural temperature of the skin was preserved, and the pulse was frequent and feeble. She refused nutritious food, but ate greedily portions of an apple or orange placed in her mouth. There was a partial paralysis of the whole of the left side of the body. The coma was not uniformly of the same degree. Occasionally it was interrupted by sharp and sudden cries, with grinding of the teeth; at night, by active delirium, and once or twice, in the morning, by a state of comparative consciousness, in which she spoke some sentences connectedly. The latter symptom followed the application of a large blister to the nuchæ. Calomel, and other bulky purgatives, administered by the mouth, produced vomiting; croton oil, which was freely prescribed, was retained, but without evacuating the bowels. The blistered surface was dressed with mercurial ointment.

*Oct. 3d.*—Face sunken; left side partially paralyzed; the right eye slightly sensible to light, the left not at all. Pulse so feeble that it cannot be counted; pulsations of the heart 160 in a minute, and irregular; no intelligence; the eyes injected and filmy; can scarcely swallow; automatic movements of the hands, but chiefly of the right hand; passes her water in the bed; no stool.

This state continued until early on Oct. 4th, when she died gradually, and by exhaustion.

*Autopsy*, 12 hours after death. Rigidity of the limbs and emaciation moderate; skin sallow, but not jaundiced; no ecchymoses in the depending parts.

*Head.*—Scalp dry, with little fat; no blood followed its incision. On removing the calvarium, a few drops only of dark blood flowed. Vessels of dura mater distended. Surface of arachnoid dry, sticky, and looking as if varnished. Its opposite surfaces were adherent at four or five points on either side of the longitudinal



sinus, where there were somewhat firm and opaque fibrinous deposits. The vessels of the pia mater were uniformly injected; the smaller of a dusky reddish hue, and the larger veins along the anfractuositities swollen and of a leaden color. About two ounces of limpid serum were at the base of the brain and in the opening of the spinal canal. The vessels of the base were injected like those of the upper surface of the brain.

A semitransparent, thick and dense layer of fibrine covered the chiasm of the optic nerves, extending along the fissure of Silvius, and the angle between the cerebellum and the pons varolii and medulla oblongata, on *both* sides. These adjacent parts were thus firmly connected, and the middle could not be separated from the anterior lobe by traction, without tearing the substance of the former. In this fibrinous deposit were numerous granular bodies, scarcely exceeding half a line in diameter, more opaque than the substance around them, but neither hard nor readily isolated from this substance. They were most abundant in the fissure of Silvius, and along the edge of the medulla oblongata and pons varolii, but also existed in the choroid plexus and the velum interpositum.

The lateral ventricles were distended with serum, and the cerebral substance between them was in some degree softened. The *internal face of the right optic thalamus was distinctly softened* in the space of half an inch square. The superior part of the hemispheres retained their normal consistence, but the base was less firm than natural. The two constituents of the cerebral mass contrasted strongly in color; the medullary portion was very white, but presented upon section innumerable dark bloody points.

*Thorax.*—The cutis was remarkably thin, with a very slight layer of subcutaneous fat. All of the superficial tissues, including the muscles, were remarkably dry. The pleural cavities and the pericardium contained no fluid. The lungs were of a perfectly natural aspect upon their anterior face, and crepitated freely when handled. The posterior surface of the lower lobe of the left lung was mottled with black spots upon a ground the color of logwood. The latter color was due to general hypostatic congestion, and the former to local circumscribed effusions of blood, about the size of an orange seed. The corresponding portion of the right lung was more thoroughly congested, its natural toughness was somewhat impaired, and a fragment of it partially sunk in water.

From several points of a section of this part pus flowed upon pressure. The bronchiæ were dyed of a dark red color: the bronchial glands were unchanged. No tubercles were detected in either lung.

*Heart.*—Its right cavities were distended with black blood, its left empty. In all other respects the organ was normal.

*Abdomen.*—The general color of the intestinal tube was a dusky red. The peritoneum dry and dull. The liver extended completely to the left hypochondrium, and its right lobe was unusually thick and had a pyramidal shape. Its lower surface presented a fissure running nearly parallel with the edge, about an inch deep at one point, and looking precisely like a cut made with a scalpel. The peritoneum over it was quite natural. The general color of the liver was very dark, and its surface mottled with lighter spots in the general dark ground: a section presented a similar aspect. The whole organ was gorged with black blood, and had less firmness than natural. The gall bladder was filled with very dark bile about the consistence of molasses.

The mesenteric glands were undeveloped, and the glands of Peyer in the ileum could only be distinguished by a reflected light. The lining membrane of this bowel was of a dusky red color. The caput coli was found in the lower pelvis, whence the ascending colon rose in front of and then to the *left* of the spine, till it reached the pancreas, where it made an abrupt turn upon itself and descended, in contact with the ascending portion, to the left iliac region, whence it again rose to the neighborhood of the spleen, and once more pursued the downward and usual course. The part between the caput coli and the pancreas was distended with gas, and hardened fæces could be felt within it. The following divisions were contracted, but contained a portion of fæces.

The uterus was scarcely thicker than a dollar, and its body about an inch in length by  $\frac{3}{4}$  of an inch broad.

The other viscera were not examined.

The points of interest in this case are the coincidence of paralysis of the left side and acute softening of the right optic thalamus; the size and singular shape of the liver; and the malposition of the colon, which may plausibly be attributed to the morbid development of the liver. It is probable that the stricture around the waist which the patient complained of may also be attributed to the condition of the liver.



*Case of Dislocation of the Crystalline Lens from a blow.* By  
FRANCIS WEST, M. D., Philadelphia.

Capt. C., of middle age, and healthy, whilst playing at cards on board of his vessel, was struck in the eye with the lighted end of a candle, thrown at him across the table. The blow, which was not at all seriously designed, was received about midnight, and on the following morning, at breakfast time, I was sent for to see him. Entire loss of vision had occurred immediately after the accident, accompanied with intense pain in the affected eye, which continued unabated at the time of my visit. There was no external mark of injury to the eye, but, on examination, the conjunctiva was found to be considerably inflamed. By considerably diminishing the light, and then presenting objects of some magnitude obliquely to the eye, it was found that the organ still retained some power of vision, but the effort to look at anything sensibly increased the pain and uneasiness. The cornea was perfectly transparent, and permitted a distinct view through the pupil of the condition of the parts within. With the exception of a very small semi-lunated portion of its superior external circumference, which remained clear and black; the pupillary opening presented a thick, milky, pearl-looking and flocculent appearance, and at points there were observable small spots of a dense chalky whiteness, caused by floating shreds of the capsule of the crystalline lens, which had become opaque. There was no observable effusion of blood in the eye. The iris, towards the inferior and internal corner of the eye, presented a very marked protrusion, occasioned evidently by the strong pressure of the upper edge of the lens, which, after having escaped through its lacerated capsule, was first anteverted, and then thrust downwards and inwards into the posterior chamber of the aqueous humor, against the iris. The sensibility of this delicate septum did not appear to be much impaired, its motions being only perceptibly diminished towards the internal canthus, by reason of the mechanical pressure which the displaced lens there exerted upon the iris. The pupil, in consequence of this impeded and irregular action of the iris, assumed a distinctly ovular shape, with the greatest diameter transversely. The crystalline lens was, apparently, so tightly impacted in its

unnatural position, that the slight manipulations which it was thought proper, at the time, to practise upon the globe, exerted no influence whatever towards its restoration. It was deemed advisable, therefore, after some very gentle efforts, to test the firmness of its lodgment, to withhold any other treatment than such as was required to allay the pain, subdue the conjunctivitis, and prevent, if possible, the occurrence of more deeply seated inflammation. With this view, perfect rest was enjoined, with constant application of cold to the eye, and occasional bathing with an aqueous solution of opium. These means were successful in reducing the inflammation present, and quieting the pain which the patient continued to suffer. In a few days after the accident, all the urgent symptoms had passed away, and the pupil, throughout the greater part of its extent, had become much clearer in consequence of the absorption of the capsular shreds. The lens, however, still remained in its false position, about four-fifths of it being lodged deeply in the posterior chamber of the aqueous humour. The sight underwent very little, if any, change or improvement during the time of my attendance upon him, and at the end of a week he returned home in his vessel. This short period did not, of course, admit the expectation of any decided alteration in the condition of the crystalline lens, which could be effected only, as was supposed, through the agency of absorption.

I received a letter from my patient's friends in the course of about a month after he left Philadelphia, up to which time he stated that no further unpleasant symptoms had occurred, and that he thought he was regaining slightly the power of vision.

It is matter of much regret that the result of this case could not have been positively ascertained, as the want of such knowledge materially diminishes its interest and utility.

In regard to the exact mode by which the blow from the candle produced the injury to the eye, it may be questioned whether it was by the direct impulsion of the foreign body upon the globe of the eye, or by the sudden and violent contraction of the muscles of the lids, induced by the natural and instinctive disposition of the eye to protect itself from the contact of external substances. We incline to the belief that the latter is the more satisfactory explanation of the phenomenon.

In regard to this instinctive vigilance of the eye-lids, it is well



known that, now and then, it is eluded by foreign substances, which thus gain access within their enclosure. A curious instance of the kind recently came under my notice. A jeweller, who was melting some solder, imprudently poured the fluid, whilst boiling, from the original vessel into another one, which happened to contain some water; an explosion at once occurred, and a considerable portion of the melted solder found its way into one of the poor fellow's eyes. I saw him in a few moments afterwards, and on separating the lids, I discovered that the space between the lower one and the globe was completely occupied by a solid coat of the metal, which was at once removed by the forceps. It presented exactly the mould of the lower section of the eye, being semi-lunated in form, and about one fourth of an inch in diameter; in thickness it was a line or more.

Mackensie and other writers upon the diseases of the eye, have related several instances of dislocation of the crystalline lens similar to the above, but according to the maxim "*observationes addendæ sunt*," I thought it might be worth while also to place the present one upon record.

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*Report of the Committee appointed to examine into the condition of the mucous membrane of the intestinal canal in persons dying of Cholera.*

[The following "Report" made to the College of Physicians of Philadelphia, is copied from the printed "Transactions" of that body. The inaccessibleness of the original to the profession generally, and the value of the paper itself, will, it is hoped, be sufficient explanation for its appearance among the original communications. The gentlemen who compose the committee are eminently reliable, as regards accuracy and experience, and we regard the "Report" as one of the most valuable contributions to the pathological anatomy of cholera. It will be seen that they have refrained from expressing any opinion as deduced from these appearances, but have preferred leaving each one to make for himself the application of them in the investigation of the pathology of this disease.—ED. EX.]

Science is positive only when its facts are positive. A subject, the phenomena of which are numerous and complex, can be

understood only when each of its phenomena or facts have been analysed, and positively ascertained.

In Epidemic Cholera, the most prominent and constant phenomena, are purging and vomiting: and in ninety or more, of one hundred cases, these phenomena appear to induce the condition that usually terminates fatally.

It is, therefore, an important object in determining the phenomena of Cholera, to ascertain whether any, and if any, what constant anatomical alterations can be detected in the intestinal canal of cholera patients who have succumbed under the disease.

The College, with the view to obtain, as far as possible, accurate information on this single question, appointed the undersigned, at the meeting held on the 19th day of June last, a committee to investigate this subject.

The Committee having attended to this duty, submit the following report:

The ordinary autoptical examinations, heretofore practised, have failed to yield any satisfactory information, and are nearly useless for the purposes of science.

Extensive structural lesions may exist, that cannot be seen, or very imperfectly discerned by the unaided sight, and without proper preparation.

It was determined by the Committee that the intestines, before being submitted to examination, should be finely injected, and subsequently inspected with the microscope.

This task was undertaken for the committee, by Dr. John Neill, demonstrator of Anatomy in the University of Pennsylvania. The admirable manner in which he has performed this duty, can be judged of by the beautiful preparations now on the table, which he has presented to the College for its museum.

The injections are made with turpentine colored with vermilion. It was found by Dr. Neill, that when he employed size, it did not penetrate well, and numbers of capillaries were not filled; the same result occurred when Canada Balsam was used. It led, at first, to the supposition that the capillaries were destroyed by the disease.

The committee, confining themselves strictly to the single object for which they were appointed, report the following facts as the result of their investigation.



1st. in the recent subject, the peritoneal coat, like all the serous membranes, was in all, remarkably dry. The lubricating serosity is deficient in the serous membranes.

2nd. The epithelial layer of the intestinal mucous membrane, was, in all the specimens, either entirely removed, or was detached, adhering loosely as a pulpy layer, mixed with mucus, or an albuminoid substance.

3rd. *Peyerian Glands.* Peyer's Glands, were developed to a greater or less extent in all the cases examined.

4th. *Solitary Glands.* These were also developed, and contained, in the recent subject, a minute quantity of white substance. These enlarged solitary glands have the appearances designated by Serres and Nonat, as Psorenterie.

The villi covering the glands of Peyer, and the solitary glands, present the same appearances as in other parts of the same intestine.

5th. *Villi.* They are denuded of the epithelial covering, but are unchanged in other respects.

6th. *Capillary Vessels.* These are entire, and manifest no departure from their normal state. The appearances of the capillaries of a cholera intestine, are identical with those of the healthy mucous membrane when the epithelium has been removed. In the natural state, the epithelium, from its thickness, conceals the injected capillaries.

In no instance was a vesicular eruption observed. In some of the dry specimens, there is an appearance that might be mistaken for it, but it is an emphysematous state, resulting from commencing putrefaction.

The foregoing facts are derived from the examination of twenty-five subjects.

SAMUEL JACKSON, M. D.

JOHN NEILL, M. D.

HENRY H. SMITH, M. D.

WILLIAM PEPPER, M. D.

*Wound of the Intestines, successfully treated.* By DANDRIDGE  
B. HILLIARD, M. D., of Halifax county, North Carolina.

To the Editor of the Medical Examiner:

SIR,—I beg leave to send you the notes of a case of wounded intestine, with recovery. On the 11th May, at 9 o'clock, A. M., I was called to see a negro slave, belonging to Capt. Hardy Pitts, who had been stabbed in the left iliac region. On reaching him, I found that nearly all the small intestine had protruded, on a portion of which was a transverse cut, three-fourths of an inch in length, with an accompanying wound of the mesentery, one of the blood vessels of which was divided. The injury had been received about an hour before my arrival, in a conflict with another slave, who inflicted it with a sharp pointed knife, making an external wound two inches in length. I immediately administered to him 30 gtt. sul. ether, and then secured the bleeding vessel, which fortunately had been compressed by the weight of the protruded mass, by ligature. The wounded intestine, which displayed the mucous membrane everted, was closed with a fine suture needle, by neatly drawing together the outer edges without puncturing the mucous membrane, by this means approximating its edges, so that when the threads should be disengaged from the outer coat of the bowel by suppuration, the inner coat would be healed, thereby leaving no orifice through which matter could escape. The ends were cut off close, and the whole returned into the cavity of the abdomen. The external wound was then closed by stitches, sufficiently to retain the bowels, leaving a small orifice through which the blood might escape, which I favored by laying the patient in a favorable position, and preventing the bowels from plugging it up by the introduction of a finger. After which I ordered him thirty drops of laudanum, to be repeated every hour till composed. Three o'clock in the evening, complained of much nausea and restlessness; ordered him 20 drops sul. ether and 15 drops laudanum, after which he took some gruel, appeared more composed, and slept during the night, On the morning of the 12th, there was much restlessness; pulse 100; abdomen slightly tympanitic; ordered mucilaginous drinks; a cold corn meal poultice, with slippery elm, over which was poured an ounce of laudanum, and the whole of the abdomen covered over with it, with



orders to renew it every fifteen minutes, and to give 30 drops sweet spts. nitre every hour till the fever abated. Two hours after, pulse 80, soft and compressible; ordered 35 drops laudanum. Slept tolerably well that night.

13th. In the morning expressed himself more comfortable; 4 o'clock in the evening complained of nausea; pulse 120; abdomen tympanitic and tender; much thirst; ordered 20 drops ether and 30 drops spts. nitre every half hour, to be followed by 35 drops laudanum; and an opium plaster around the umbilicus; the cold mush poultice applied as before, and renewed every fifteen minutes. In a few hours the pulse fell to 70, and the patient expressed himself comfortable. 14th. Some fever, which was soon subdued by the same prescription. On the 15th, 16th, and 17th, continued the same treatment, so far as the indications demanded it. On the 18th, ordered an injection of 12 oz. slippery elm tea, to be repeated in three hours. 19th. 12 oz. corn-meal gruel, 3 oz. castor oil, and 60 drops laudanum, by injection, which produced a copious evacuation, the first he had had since the accident. Three weeks after, the patient resumed his labors on the farm, and at this time (Dec. 3) is perfectly sound and healthy. Had I allowed the ends of the sutures to depend externally, where they would have been partially confined, the peristaltic motion of the bowel would have caused the stitches to tear out. My thanks are due to my highly valued friend, Dr. Thomas Arrington, of Nash county, for the efficient services rendered me in this case.

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PHILADELPHIA COUNTY MEDICAL SOCIETY-

DR. S. JACKSON (late of Northumberland) in the Chair.

*Meeting for Discussion.*

(Reported by Mr. J. Aitken Meigs.)

*Upon the causes of the greater mortality of male children, and the influence operating to change the relative proportion of the sexes at birth.* By G. EMERSON, M. D.

Up to the fifteenth year, there is an excess of 15 per cent. in the number of deaths of boys over that of girls. This excess in the male mortality is commonly ascribed to the greater exposure, and rougher sports and amusements of the boys; an erroneous idea,

the fallacy of which is shown in the fact that the majority of the deaths of the males takes place in early infancy, when no such exposure and danger consequent to said rough sports can possibly exist. The deaths of boys, too, from climbing, swimming, &c., equal those of the girls from scalding, domestic accidents, &c.

The particular diseases which give rise to death in the two sexes, are very different in their nature and characteristics. Thus, males are attacked with violent inflammation of the brain, accompanied with serous effusions, convulsions, &c.; inflammations of the stomach, lungs and other important organs; while females suffer from hooping-cough, small-pox, measles, thrush, &c. In boys, the character of the disease is sthenic; in girls, asthenic. The diseases from which females suffer most are seated in the cutaneous and mucous tissues.

Of 100,000 deaths reported by the Registrar-general of England, 31,671 were under the fifth year; and of these, 15,006 were females, and 16,665 were males. Of the above, the number of deaths from inflammation of the brain were 2550 males, and 2081 females; of dropsy of the brain, 1481 males, 1151 females; small pox, 213 males, 240 females; hooping-cough, 1115 males, 1445 females; measles, 1048 males, 1028 females, etc.

From these and similar statistics, the inference follows that the disproportion in the deaths of the two sexes, during childhood, does not arise so much from exposure to external circumstances, as from differences in physical organization.

From the fact of boys succumbing so easily and so rapidly to diseases of a sthenic type, and females to those of an asthenic character, we deduce the practical hint of combatting most energetically the inflammatory symptoms, of the one, as soon as manifest, and preventing too great exhaustion of the system when symptoms of depression begin to appear in the female infants.

The Dr. then spoke of the effects of weather upon infant mortality, and more particularly of the limitation of the effects of hot weather, to the period of lactation. For interesting facts relative to this subject, he referred to statistics lately published by himself in the *American Journal of the Medical Sciences*.

During the first year of infant life, the season of the greatest mortality is the three hot summer months. The number 250 representing the mortality for May, we would have 836 as that for



July. After the second year the deaths are more equally distributed throughout the months; the number seeming even less in the hot than in the temperate and cold seasons. The heat, which at an earlier period was inimical, would now appear to be friendly to infantile life.

Dr. E. next referred to the influence of certain agencies which changed the ordinary proportions of the sexes. The general preponderance of males over females at birth, is about  $7\frac{1}{2}$  per cent. In 1833 the singular phenomenon of a reverse proportion was evident. There was not only a deficiency of male births, but moreover, in the months of April and May of that year, a decided female excess. Upon further investigations, this female excess was found to be the product of conceptions occurring in the months of August and September of 1832. This, as is well known, was the period of the first invasion of epidemic Cholera. Looking abroad for corroboration of this singular fact, it was found to hold good also, in the proportion of births occurring nine months after the epidemic had appeared at Paris. From this and other investigations, he arrived at the conclusion, that this change in the relative proportion of the two sexes at birth, was owing to the depressing influence of cholera. He has further observed that a tendency to the above result is always produced by the operation of any class of depressing agents, while circumstances that tend to high physical development increase materially the male excess.

In France and Prussia, where the mass of the people labor much harder than in our own country, and are poorly fed and clothed, the excess of female births is slightly under 6 per cent.; in England, 5 per cent.; in Philadelphia, 7.5 per cent.; and in our western country as high as 10 per cent.

Investigations into the comparative proportions of the sexes born in city and country populations, manifest the existence of a greater male excess in rural districts. This, from the foregoing observations, was to be expected, since in cities, intemperance, foul and vitiated atmosphere, unwholesome diet, and other depressing agencies, operate much more strongly than in the country. Hence, the Dr. observed, this proportion of the births of the two sexes, may be considered as a sort of natural thermometer of the physical comfort and advantages enjoyed by a community.

The institution of polygamy may have originated in a scanty

supply of food occurring at some former period in the community where such institution exists, and evincing its depressing tendency by a predominance of the female over the male population. Once established it would foster itself.

The proportion of the two sexes being under such considerable control, it remains for the various legislative bodies throughout the civilized world to benefit and meliorate by their wise enactments the condition of the social cosmos.

Dr. J. Bell desired to suggest to Dr. E. an anatomical fact which he deemed would go far towards explaining the excess of male deaths. The male head, he stated, is larger at the period of birth than the female. and consequently much more liable to severe pressure during the active throes of labor; and as a consequence of such disastrous pressure of the cranial parietes upon the encephalic mass, death, or at least disease, insidiously, but surely terminating in death, must sooner or later supervene. In accordance with this anatomical observation, we find that the majority of male deaths occur during the early months of the first year of infantile life. Pregnant women, it is well known, die more frequently from giving birth to male infants, rather than female. The above facts Dr. B stated upon the authority of Dr. Simpson, by whom the observations in question—although not original with him—were brought before the profession. Dr. J. Clarke, of Dublin, had noticed the same fact, as had recently, Dr. Cheau, in an essay in the *Annales d'Hygiène, et de Médecine Légale*, Juillet, 1846. Tiedemann affirms, also, that the difference in the size of the male and female brain, at birth, is retained throughout life.

Dr. Darrach. The cerebral lobes of the male brain are larger than those of the female, while the cerebellum of the latter preponderates over that of the former. Hence the ovoidal form, which we so much admire, in the female head. During parturition, the male head, in consequence of its approximation to the spherical form, is subjected to an almost equal pressure upon either of its axes, while as respects the female ovoid, the difference between the pressure upon the conjugate and transverse diameter is considerable. This anatomical fact is sufficient to explain the greater mortality among the male infants after parturition. The seeming want of development of the cerebrum is amply compensated, in the female, by the proportionally larger size of the ganglionic



system, and the more complicated nervous connections existing between the pelvic ganglia and viscera. The necessity and utility of this equilibrating preponderance in the sympathetic and pelvic ganglia, becomes obvious when we reflect upon the function which the female performs in the grand economy of life. Generation demands the continued exercise of her strongest sympathies, not only during the tedious, painful and laborious steps of the process, but long afterwards, when a living creature, weak and helpless, looks to her for sustenance, comfort and protection.

Dr. Emerson admitted that some weight might be due to the opinion, that serious injury was often sustained by the infant brain during parturition, but that this injury did not explain the cause of cerebral disease and mortality occurring at more advanced periods of infancy.

Dr. Coates desired to know why Philadelphia was pre-eminent, among all other cities in the Union, for the mortality that occurred in it from cholera infantum during the second year of infantile life.

Dr. Darrach. New York, Boston and Charleston enjoy sea air, while Philadelphia is enveloped almost uninterruptedly in an atmosphere maintained at a high temperature. Add to this the alimentary cause of irregular or improper diet, and we have efficient explanation of the origin of the cutaneo-abdominal symptoms, which are prominent in this disease. As confirmatory of this opinion, he mentioned the successful results which he had experienced in the treatment of the malady. Acting upon the suggestion of Dr. Chas. Caldwell, he was accustomed to send his little patients to Kaighn's Point, giving them, at the same time, calomel in minute doses. This place is selected as enjoying, from the peculiarity of its location, the benefits of a sea breeze above all others situated so high up in the course of the Delaware river. Old pilots and sailors, residents of this spot, bear testimony to the fact of the existence of a sea breeze, and speak of it in this respect as a sort of minor Cape May.

Dr. Emerson concurred with Dr. Darrach in thinking that the continued heat, such as we have in this city, uninterrupted by any or scarcely any refreshing coolness, was an efficient agent in producing the disease. But he would call to the minds of the gentlemen present the effects of such heat upon the inmates of our

crowded courts and alleys especially, where the disease, in the majority of cases, originated, and was fostered by unwholesome food, a stifled and filthy atmosphere, &c. To the presence of refrigerating agencies in Boston, and some other ports upon the seaboard, he attributed their greater exemption from cholera infantum.

Dr. Parrish stated, that according to recent accounts, the mortality in St. Louis, from the disease in question, is greater even than in Philadelphia. In reference to the malady as existing in Philadelphia, the Dr. desired to state, that in addition to the causes already advanced by the gentlemen present, the mode of building in courts and alleys, and immediately opposite blind walls, was such as would tend to keep up the disease continually. Such buildings, moreover, were constantly being erected, even in the recent portions of the town. As far as he was aware, this cause did not exist so extensively in New York, or any other of the places mentioned during the evening's discussion.

Again, the custom of causing the child to sleep between the parents, is of itself sufficient, during the hot nights of our summer, to bring on an attack of the disease. In relation to Dr. Darrach's hint at the practical treatment of the disease, he declared the practice to be an old one, and that Dr. S. P. Griffiths was in the habit of lancing the gums merely, and sending the little sufferers into the country. Dr. P. affirmed himself to be a living example of the propriety of such practice. When young he was attacked with the disease, and being brought to the verge of the grave, his father resolved as a dernier resource to try the effects of a change of locality. Placed upon a steamboat and borne rapidly away over the bosom of the Delaware; but a few hours sufficed for the fresher atmosphere he then inspired, to invigorate his whole system, and breathe anew into him, as it were, "the breath of life." From that moment he rapidly recovered.

Dr. Darrach, regarded solar influence as the efficient cause of the complaint in our city, unabated as it is by the sea breeze which daily blows through the crooked lanes and alleys of New York, robbing them greatly of their heat.

Dr. Jackson inquired of Dr. D. if narrow streets and alleys were so much warmer than broader thoroughfares; if they were not in reality cooler. Nero, it should be recollected, in rebuilding the



city of Rome, after its conflagration, having widened the streets, and enlarged the public places of meeting, was inveighed against by the citizens as having let in the sun-light to scorch them, so much warmer had the city become.

Dr. Darrach remarked in reply, that while Paris, with its narrow streets and lofty houses,—the latter shielding the former from the sun,—was comparatively cool, Washington with its broad streets was proverbially uncomfortable, in consequence of the heat reflected from the houses.

Dr. H. S. Patterson, from Dispensary and other experience, had been induced to believe, that the disease in question was not so common among the colored as among the white population of our city ; and that among those Irish emigrants who were exposed to the same exciting causes, the mortality from the disease was greater than among any other class of the people. Improper diet, placing the children early at the table, the hard labor continually undergone by the mother, and the unwholesome food upon which she habitually fed, he considered as the predisposing causes exceedingly active in the production of the complaint among the negroes and the destitute whites. Whether, upon the one hand, the facility, with which the negro repels the malady, is purely the effect of a constitutional peculiarity, transmitted to him by his African ancestors ; and whether the sudden and continued vicissitudes of our climate, so unlike the comparatively equable seasons of Ireland, constitute the efficient cause of the greater mortality among the Irish, are questions of deep interest as regards the etiology of the disease. Upon this point, and also whether cholera infantum was on the increase in the neighboring country towns, he desired information of the gentlemen present, inasmuch as it was a matter of practical utility to determine the propriety of sending patients to the surrounding country for relief.

Dr. J. Bell, in confirmation of the influence of high temperature in producing cholera infantum, adverted to the great mortality in London, the year before last, from this disease, owing to the unusually intense heat of the summer. He regarded fresh air, and pure Schuylkill water, as having done more for the prevention of the disease, in this city, than any other two causes. In reference to the neglect of suitable hygienic measures elsewhere, he stated that in fifty towns in England in which the disease was rife, six

only were fairly, not fully, supplied with water, and had a proper amount of sewerage. He also animadverted at some length upon the imperfect ventilation which existed in the houses of the rich, owing to the erroneous plans of building of the present time.

Dr. Darrach desired to make an observation, having some bearing upon Dr. Patterson's remarks. According to statistics which he had kept while physician in the Eastern Penitentiary, it was found that during the winter season, the negro prisoners, principally, were affected, and with chronic pleurisy; while during the summer, the white prisoners, with diarrhœa.

Dr. Jackson remarked that negroes generally were more commonly affected with disease of a bilious remittent type, to which cholera infantum was supposed to be closely allied.

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### BIBLIOGRAPHICAL NOTICES.

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*A Theoretical and Practical Treatise on Midwifery, including the Diseases of Pregnancy and Parturition.* By P. CAZEAUX, Adjunct Professor in the Faculty of Medicine of Paris, etc. etc., (adopted by the Royal Council of Public Instruction.) *Translated from the second French edition, with occasional notes and a copious Index,* by ROBERT P. THOMAS, M. D., Member of the Philadelphia County Medical Society, late Demonstrator of Anatomy in the Franklin Medical College, etc., *with one hundred and seventeen illustrations.* 8vo. pp. 765. Philadelphia, Lindsay and Blakiston, 1850.

Considering the numerous excellent and comprehensive systems of Midwifery which have appeared in this country within a very short period, there would seem to be but little necessity for adding another to their number, and yet, the treatise before us comes to us with recommendations of so high a character as to warrant the translator and publisher in placing it within the reach of the great body of the American Medical Profession. Its adoption by the Royal Council of Public Instruction—the position and character of its author as a teacher of obstetrics—his opportunities for



clinical experience, and the fact of the early demand in France for a second edition, present strong extrinsic recommendations of the work, which are fully sustained by its intrinsic merits.

Written expressly for "the use of students of medicine, and those of midwifery especially," its teachings are plain and explicit, presenting "a condensed summary of the leading principles established by the masters of the obstetric art," and such clear practical directions for the management of the pregnant, parturient, and puerperal states, as have been sanctioned by the most authoritative practitioners, and confirmed by the author's own experience. Collecting his materials from the writings of the entire body of antecedent writers, carefully testing their correctness and value by his own daily experience, and rejecting all such as were falsified by the numerous cases brought under his own immediate observation, he has formed out of them a body of doctrine, and a system of practical rules, which he illustrates and enforces in the clearest and most simple manner possible.

The first two parts of the *Treatise* present a very full and excellent account of the anatomy of the female organs of generation—the physiology of generation—the anatomical changes which occur during the progress of gestation—the diagnosis of pregnancy—the history of the fœtus, and the pathology of gestation. The reader will find in the second part a very accurate account of the modern doctrines of ovulation, and an excellent and intelligible history of the changes which the human ovum undergoes from the period of fecundation to the termination of utero-gestation. The changes that take place in the ovary and ovulum, both before and after fecundation, are illustrated by numerous engravings, exhibiting the successive stages the ovum passes through, from its primary appearance as a microscopic point, to the formation of the corpus luteum in the non-fecundated state, and to the development of the allantois, in that of conception. Every particular, in fact, connected with the maturation and perfection of the human ovum, upon which there is a general agreement among the leading physiologists of the day, has been very clearly described and pictured by M. Cazeaux.

Part the third is devoted to the history of labor in general, its causes and phenomena; the several presentations and positions; the management of the parturient and puerperal states, and the atten-

tions required by the mother and child immediately after the termination of labor. The mechanism of labor is very ably defined; we agree with the translator, that the doctrines inculcated on this all important subject by M. Cazeaux are founded in truth. "The author has adopted the simple and beautiful classification of M. Nægèle, by which the description of the whole process of delivery is wonderfully simplified, its comprehension is rendered more intelligible, and the indications for manual or instrumental aid, in cases of difficulty or deformity, become more clear and determinate."

The positions and presentations of the fœtus, and the several stages of labor in each, are illustrated by very excellent wood cuts, without which the young student would scarcely be able to understand the verbal exposition, however clearly and explicitly given.

The fourth part of the Treatise treats of Dystocia, or preternatural and painful labors. It consists of two divisions, in the first of which are considered the causes of dystocia, or the circumstances that require the intervention of art. The author distributes all difficult labors into three groups: 1, where they are rendered difficult, impossible, or dangerous by a deficiency or an excess of action in the expulsive forces; 2, where any obstacle whatever exists which might oppose the easy expulsion of the fœtus; and 3, where the labor is complicated by any accident, sufficiently grave to compromise the health or life of either the mother or child.

The second division of part four treats of obstetrical operations. An attentive study of this portion of the work is not only recommended to the student of midwifery, but we are persuaded that the practitioner will derive from it practical precepts of a most valuable character. To know when manual interference is absolutely necessary, and to resort to it promptly when this decision has been formed, and to wait patiently in all cases in which there is good reason for believing that delivery will be safely effected by the powers of nature, without the necessity of manual or instrumental aid, is the characteristic of the well instructed and judicious obstetrician, and the rules and precautions laid down by M. Cazeaux, are well calculated to form this characteristic. While he points out the mischievous tendency of an unnecessary resort to manual and instrumental means for terminating the labor, he, at the same time, inculcates the importance of the early use of those means whenever absolutely required to ensure the safety of the mother or child.



The chapter on the induction of premature labor is deserving of an attentive perusal.

Part the fifth and last, treats of the delivery of the after-birth. The principles and practice laid down by the author, are sound and judicious. They differ, however, in nothing from those adopted and practiced by every experienced accoucheur.

No notice is taken in the work before us of the use of the recently introduced anæsthetic agents in labor. This is much to be regretted. It is a subject upon which it is all important that the student of midwifery should be correctly instructed. Of the advantages and dangers of the production of anæsthesia in the parturient female, he should be clearly informed, as well as of the results of experience, and the judgment formed of the practice by the authoritative masters of the obstetric art. We feel somewhat surprised that the translator has not supplied the omission of the author in a note or additional chapter.

The translation of Dr. Thomas, so far as we can judge, without having carefully compared it with the original, is tolerably well executed; it is occasionally, perhaps, too literal. The style is plain, and in general, sufficiently clear, though marred by occasional Gallicisms. The notes added by the translator, are few and unimportant.

In the present notice of the treatise of M. Cazeaux we have aimed at nothing further than a general expression of our views of the leading character of the work. In a more minute and critical examination of its several parts, we should unquestionably be obliged to dissent occasionally from the author; but not, we admit, from any leading principle or rule of practice laid down by him. In the correctness of all the more important of his teachings, we fully acquiesce, and can very conscientiously recommend the work to the medical student, as one that will prove to him a safe and valuable guide to a knowledge of obstetrics.

D. F. C.

*A Treatise on Dislocation of the Shoulder.* By GEORGE O. JARVIS, M. D., Author of *Lectures on Fractures and Dislocations, &c., &c.*; together with important cases illustrating the benefits of the *Adjuster*. Compiled by GEORGE KELLOGG, A. M.

This is the title of a well-written pamphlet of about thirty pages, detailing a single case of dislocation of the shoulder, with the head of the humerus in the axilla, together with a mention of other cases of injury to the bones and joints. It comes to us as a recommendation of the instrument well known as "Jarvis' Surgical Adjuster," which was the apparatus relied upon and used with success in the instances of which an account is given by our author. It is presented, as stated in the preface, "at the solicitation of many members of the profession," and is thought by the compiler, Mr. George Kellogg, to demonstrate "the indispensable necessity of the adjuster," while he states his disinterested motive in making the publication, to be, a desire "to promote the usefulness and unfailing success of the whole body of practicing surgeons."

If the instrument thus strenuously advocated possess the merits ascribed to it by its manufacturer, a *desideratum* is doubtless attained in the healing art, and on its adoption in practice the surgeon must soon banish from our midst the many cases of permanent deformity from severe injuries of the bones and joints which have heretofore been his *opprobria*, and put an end to costly and vexatious suits for malpractice, by which he is too frequently annoyed at the present day.

The author, Dr. Jarvis, prior to entering on an account of the case of dislocation of the shoulder, on which the essay is based, undertakes to lay down the principles on which all such injuries should be treated, and claims for the adjuster the ability to carry out the different indications, without regard to the character, extent, or duration of such injuries. The Dr. very truly states, that there is a difference between the pathology of a recent and old luxation of the shoulder joint, but still insists that the same instrument is equal alike to the reduction, unaided by the adjuvants usually resorted to, such as venesection, tartar emetic, the warm bath, and other means for the production of muscular relaxation, which have been commonly considered necessary in cases



at all difficult of reduction. On the contrary, he seems to insist that much strength of the muscles is necessary (and the more the better) to accomplish the object, as upon their contraction, after having been put sufficiently on the stretch to dislodge the head of the bone from its unnatural position, does the success of the treatment depend. By the instrument, extension is made in one way only, and the surgeon is deprived of the ability to change its direction when desirable, as is the case when the pulleys are used, or when the heel or knee is placed in the axilla. He also discards one of the old and fundamental directions and modes of practice, that the extension should be made in the line of the dislocation, and is entirely content with bringing the head of the bone on a level with the glenoid cavity, when all extension is to be suddenly removed, and the head of the bone driven forcibly by the contraction of the muscles, through the capsular ligament, (in which the laceration is presumed to have been closed,) into its natural position.

It is presumed that the laceration in the ligaments, through which the head of the bone has escaped, is often partially closed after old luxations; and it is known that all the muscles about the shoulder, *and not alone the deltoid and supra spinatus*, have become to a great extent paralyzed, certainly *too* much so to admit of such powerful contractions as to inflict on the closed capsule "*the impetus of a blow*, from the head of the bone being forcibly driven against it," which will lacerate it "on the same principle that an arrow is driven into a board." The case related as having been operated on successfully at the Marine Hospital in Mobile, was certainly a fair one for the trial of the adjuster, as the dislocation of the shoulder was of fifty-two days' standing, and its reduction had been well attempted by other means. Still we are unwilling to throw aside appliances which have been found heretofore generally equal to the end, for one, which can only be applied in one way, and which for its success entirely depends on the strong contraction of muscles, the functions of which must be too much interfered with, to exercise so great power after having been for so long a time totally inactive.

The author gives a series of reasons why the adjuster should be used to the exclusion of other means of extension and counter-extension, which are ingenious and applicable to his invention,

though he certainly loses sight of the injury which may be done to the axillary artery and veins by the powerful and long-continued force which must be applied to old and obstinate cases, no matter what apparatus is used for the purpose. He does not allude to the dislocation of the humerus with the head of the bone beneath the pectoralis muscle and below the clavicle, though we presume that he considers the adjuster equally applicable to the reduction of this as to the other varieties of luxation of the same bone.

The cases appended to the article on dislocation of the shoulder in which the adjuster was successfully applied, are three of similar injury, one of which was of four years' standing, one of thirty-nine days, with fracture of the upper part of the humerus, a case of oblique fracture of the tibia and fibula, one of compound luxation of the thumb, one of luxation of the metatarsus upon the tarsus, one of luxation of the hip, and one of united fracture of the femur with great deformity. In the latter case the bone was re-fractured by the adjuster, "and the limb dressed on the double inclined plane in the manner directed in Jarvis' Lectures, pp. 47, 48 and 49, for oblique fracture of the thigh," and the recovery took place "with a limb in every respect as good as the other." These cases, if they do not prove too much, are more than enough to establish the value of the instrument, which is so modified as to be applied to the injuries of all the limbs and many joints of the body.

The essay, as we have before stated, is well written, and for it we are thankful to its author and compiler; but we would be pleased to receive accounts of cases treated by the adjuster from professional men uninterested in its manufacture and sale, so that we may not by possibility regard it in the same light as Peter Pindar's razors, "*made to sell.*"



*Transactions of the American Medical Association.*

Vol. II. pp. 956.

If the merits of a volume were to be judged of by its size, we should at once pronounce these "Transactions" a highly valuable production; but inasmuch as quality, not quantity, of matter must be the test, and as it often happens that the most voluminous works contain less actual information than those of meaner pretensions, it becomes us to look beyond the cover, into the contents, and see how far this massive volume, may sustain the reputation of the numerous and important body from which it emanates.

We hold that every American physician is more or less interested in the decision of this question.

The "Transactions" represent, in one sense, our medical character. The work is a national one; emanating from a representative body, supposed to combine within itself, the best talent of the profession in this hemisphere; which although young in years, has proved itself vigorous and energetic in action.

The best medical minds in America are enrolled amongst its members, and have taken an active part in its proceedings; and if the Association has failed to make a favorable impression, both at home and abroad, as to the present state of medicine amongst us, it has rather injured the cause of science than promoted it.

It is therefore with some anxiety that we have opened the volume before us; but as we have proceeded in its examination, doubts and fears have given place to a feeling of satisfaction, that the labors of this great national association have been worthily performed, and that this volume of Transactions, will confer lasting credit upon the medical literature of the United States.

The chief portion of the work consists of the reports of the various committees appointed to investigate the different branches of medicine, and although some of these might, perhaps, with propriety, have been curtailed, or have been confined more strictly to matters connected with the progress of medical science in *this* country; yet they all manifest a degree of research and an amount of learning highly creditable to those concerned in their preparation.

In connection with these reports, it has been suggested, that the

time required in their reading, and the space which they occupy in the printed Transactions, are a sufficient reason for discontinuing them, and a proposition has actually been made to abolish the standing committees altogether. As this matter will come up at the next meeting, to be held at Cincinnati, it deserves the serious consideration of the members. For our own part, we are not prepared for such a sweeping change in the original plan of the Association. Were it adopted, it is to be feared that the time now devoted to the reading of valuable and solid papers, would be consumed in fruitless discussions upon medical politics, and that matters of science, and the true and permanent interests of the profession would be overlooked. At the same time we believe that the duties of the standing committees on medical topics should be circumscribed within the limit of the constitution, and their attention directed mainly to new ideas and modes of practice, originating in America.

This would give to their labors a freshness and originality which they do not now possess; while it would impart to the volume of Transactions a more distinctive and national character, and curtail its present unwieldy dimensions.

The first report of the series, on medical sciences, from the pen of Dr. L. P. Yandell, of Louisville, Ky., is a full and elaborate retrospect of the improvements and discoveries in Anatomy, Physiology, Hygiène, General Pathology and Therapeutics, Medical Jurisprudence, Materia Medica, &c., made within the year, so far as these have come to the knowledge of the committee through the medium of medical periodicals, books, &c.; this occupies 82 pages, and is not confined to the progress of medicine in this country alone. Indeed the committee say that they have not "restricted themselves in their retrospect to medicine at home," conceiving that this course would render their report unsatisfactory and incomplete. Whether this extension of the field of enquiry beyond the limits marked out by the rule of the Association, will be generally approved, is perhaps questionable; while at the same time it must be acknowledged, that a very large amount of valuable matter would be excluded, by conforming to the requirements of the law. As it relates to foreign improvements, however, this omission would be less regarded, from the fact that a summary of a like character is to be found in the Retrospects of Braithwaite and



Ranking, which are issued in this country at a cheap rate, and extensively circulated; and hence we cannot fully accord with the views of the committee on this point. It would carry us far beyond the limits assigned to this notice, to examine this interesting report in its various details. As an able and lucid summary of new facts, theories and suggestions, on the several branches embraced in the enquiries of the committee, it will be profitably consulted by the profession, both here and abroad; while the amount of research, industry and taste, displayed in its preparation, will fully sustain the reputation of its accomplished author.

The report of the Committee on Practical Medicine, Dr. D. Francis Condie, chairman, is a clear and concise notice of such epidemic diseases as have occurred in the United States within the year, so far as they have come to the knowledge of the committee. The materials at their disposal did not admit of a full and accurate delineation of many of these diseases, but where they possessed the required information this has been done. Typhus and typhoid fevers, erysipelas in its various grades and types, the febrile exanthemata, dysentery, cerebro-spinal meningitis, yellow fever, and cholera, as they prevailed in different sections of the United States within the year, form the chief topics of this valuable paper. Such annual exhibits of the rise, progress and peculiar characteristics of epidemic diseases, are peculiarly interesting, both for present instruction and for future reference; and we cannot conceive of a more appropriate object for a great national medical association, than to bring this knowledge together in a concise form, and spread it before the world from year to year.

Appended to this report, are several interesting papers on the epidemic diseases of particular localities, written by practitioners who were addressed by the committee. Two of these letters are from New Jersey, one from Dr. J. F. Garrison, of Swedesboro', and the other from Dr. J. Fithian of Bridgeton; the other refers to an epidemic dysentery, as it prevailed in Cambridge, Mass., and is from the pen of Dr. Merrill Wyman, of that place.

Next in order is the report on Surgery. Dr. Nathan R. Smith, of Baltimore, chairman.

Dr. Smith has also confined himself mainly to a retrospect of the progress of surgery in America, within the past year, though he states that "the small amount of the required information, fur-

nished from these sources, (viz., replies to a private circular and the journals,) and the brief period which has elapsed since the last report, will, it is to be hoped, justify the chairman of your committee, in presenting such results as may have fallen within the sphere of his own personal observation; and also authorize retrospection, in relation to such alleged improvements, as may never yet have been presented to the profession, though of date anterior to the past year.

The employment of anæsthetic agents in surgery, and the comparative merits of ether and chloroform, occupy a prominent place in the report. The dangers to be apprehended from the use of both these agents are fairly stated; and the following just conclusion is arrived at: "It is a rational inference," says Dr. Smith, "that any agent, sufficiently powerful to render the living system insensible to the pain of a severe surgical operation, (lithotomy, for instance,) must exert a tremendous influence upon the vital powers. It is by virtue of this counter-impression that its remarkable effect is accomplished. Is it not rational, also, to suppose that such powerful impressions will sometimes be injuriously exerted, and that that which is so powerful for good, should occasionally be equally so for evil? This must be true, if these agents be at all analogous to other articles of the *Materia Medica*."

As chloroform is the most powerful anæsthetic agent, it is fair to presume that it will prove the most dangerous, when incautiously administered; and that immediately fatal results from its use will be more numerous. The fifteen fatal cases collected by Dr. Warren, are admitted; but these are considered a small number in comparison to the millions of subjects to whom it has been administered, and should not be considered, according to the committee, as a valid argument against its use under proper circumstances. "The individual," says Dr. S., "who subjects himself to its influence, ought to feel no more apprehension than he who takes his seat in a rail road car, and much less than one who essays a voyage across the Atlantic."

The superiority of chloroform over ether, is sustained by the testimony of a number of eminent American surgeons, of large experience, whose views were solicited, and altogether from a strong array in favor of this powerful agent. Drs. Warren and Knight, with some other very respectable names, are, however, found



against the use of chloroform, and in favor of ether; the former gentleman preferring the chloric ether to either article.

In view of all the facts developed within the year, Dr. Smith fully sustains the views of the former committee, for 1848, in regard to the use of anæsthetic agents, and considers that great progress has been made "in establishing professional and public confidence in these extraordinary agents, and on the vast benefit which is likely to result to mankind, from this achievement of science and humanity."

The remainder of this interesting report is occupied with the history of improvement in the treatment of fractures and dislocations, and with the replies to the circular of the committee upon other practical questions.

They conclude with the sentiment, that "in this department of medicine, the spirit of improvement is abroad in our country, and that the inventive genius which we claim as a national characteristic, is being exercised with signal success, in whatever relates to the science and art of surgery."

We have only to regret that the topics discussed in this valuable paper are confined so exclusively to the mechanical and operative parts of surgery; with so little attention to the higher theme of the medical treatment of surgical diseases. The latter is certainly one of great interest, and we would fain hope that the spirit of progress would be found equally marked in this department of the science.

The report on Obstetrics, from the lively pen of Dr. Gilman, of New York, is divided into two parts, viz., Diseases of Females, and Obstetrics proper.

Under the former head is included, congestions of the os and cervix uteri, and the importance of the speculum in diagnosing these affections; uterine displacements, with an account of recently invented instruments to correct them, occlusion of the vagina, ovariotomy, &c. And under the latter, the practice of separating the placenta from the uterine wall in cases of placenta previa, and the use of anæsthetics to control the sufferings and facilitate the progress of labor.

Our space will not permit even a passing notice of these several topics, except the last, the importance of which, at this juncture, seems to demand some remark.

There is certainly no question in the whole range of obstetrical practice of equal interest with this.

Under what circumstances should anæsthetic agents be administered to women in the throes of labor? Should they be given in natural labors or only in protracted or instrumental cases? What are the dangers attending them? Have there been fatal results, and if so, how many, and under what circumstances? Which agent is preferable, ether or chloroform, or a combination of the two? These questions are continually presenting themselves, and the great mass of the profession are still in doubt and anxiety in regard to their solution.

While some accoucheurs of high authority have boldly denounced the use of anæsthetics in midwifery altogether, solely on theoretical grounds, and without any personal experience; others of equal credit have, from the first, taken strong ground in their favor, and have given to the profession the results of their extensive experience.

The committee, in entering upon the subject, appear anxious to treat it impartially, and have, we think, presented the profession with a fair and valuable transcript of the present state of the question.

To Dr. Walter Channing, of Boston, they award the credit of having given to the profession the largest number of cases of etherization in midwifery, which have yet been published together, derived not only from his own large experience, but from forty or fifty physicians residing in and around Boston, amounting in all to five hundred and fifteen cases of natural labor, and fifty-two cases of instrumental or complicated labor. The results of this large number of cases are carefully analysed, and are declared to be highly favorable to the use of anæsthetics in natural labor, while in the instrumental and complicated cases, the success has been beyond what is usual, and "most unexpectedly favorable." Dr. Channing's experience on this point, is compared with that of Dr. Collins, of Dublin, whose work "presents the largest mass of statistical information on obstetrics ever collected in the English language," and a difference in favor of Dr. Channing is clearly shown.

Reports from Dr. G. N. Burwell, of Buffalo, Dr. H. Lindsly, of Washington, D. C., and Dr. Joseph Parrish, of Burlington, N. J.,



are also referred to by the committee, as confirmatory of the favorable estimate of etherization, derived from the experience of Dr. Channing and his Boston contemporaries, while the foreign reports on this subject, from some of the leading accoucheurs of Great Britain, France and Germany, induce the committee to believe "that anæsthetics are gradually gaining favor with the profession everywhere."

The various advantages of etherization beyond the relief of pain, are also freely discussed; amongst which are mentioned the more perfect contraction of the uterus after delivery, and the consequent diminished liability to hæmorrhage. Upon this point there has been, during the year, considerable testimony, but not in the opinion of the committee of such character as to determine its powers. While the agency in relaxing the soft parts, and its harmlessness upon the fœtus, are considered settled.

Some encouraging experience in favor of the remedial powers of anæsthetics in puerperal convulsions, is also given, and the success reported is believed by the committee to establish their character in this dangerous and frightful disease.

In summing up the results of the enquiry, the committee conclude that the cases in which ether or chloroform have been given to parturient women must now be enumerated by thousands, and "in no one case has a fatal result followed."

"This result, (say they,) if it stood alone, would abundantly establish the safety, as well as the power, of anæsthetics, and would enable us to confer upon woman the greatest benefit she has ever received from medical science." In surgery, however, death has in several cases occurred, as the direct effect of the inhalation, and this has had a most decided influence upon anæsthesia in obstetrics. The extent to which these unfortunate results in surgery should operate, is a question which obstetricians must decide for themselves, and upon which the committee decline the expression of a positive opinion. In this connection an ingenious explanation of the different results in surgery and obstetrics, furnished by Dr. Channing, is given.

In surgery, says Dr. C., the agent is used as a preparative to the operation. Pain is not at the time present, and has not yet exerted its influence on the nervous system—that system is in its integrity, and has of course its greatest capacity for impression,

the greatest amount of sensibility, with the least power of resistance. The mind, too, consents to the same thing, and no moral resistance is made; whereas, in labor the pain is present, and has been for a long time; the nervous system has been greatly taxed, its power has, so to speak, been used up. Impressions upon it are weaker than they would be under other circumstances—the system comes readily under the anæsthetic influence—very little ether or chloroform is necessary, and when it is used it is never pushed by the judicious accoucheur to the entire destruction of consciousness. Whether this explanation be or be not satisfactory, it is certainly true that all the deaths reported from the use of chloroform have occurred in surgical practice, and in most of them it has been given preparatory to trivial operations.

The committee compare the relative advantages of ether and chloroform, and evidently incline to the latter, believing that it possesses every advantage except safety. They acknowledge, however, that the administration of this article requires a great amount of skill and tact, which can ordinarily be gained only by experience; and hence they recommend that all persons not practically familiar with anæsthesia, should make their first trials with ether. Where thorough knowledge and abundant skill exists, then few if any fatal cases will occur. In regard to the limits within which anæsthesia should be practiced in midwifery, the committee remark, that those who resort to it indiscriminately, or in ordinary cases of labor, are in a very small minority; while a very large majority of the profession would favor it in operative midwifery, and perhaps a majority would give either ether or chloroform in difficult cases of complex or of regular labor. In operative midwifery the committee speak with great confidence of the advantages of anæsthesia, believing that the patient's chance of recovery is greatly augmented by the suffering and exhaustion which she is saved.

Several other points are briefly noticed in the report, which we shall pass over, and reserve a notice of the other contents of the volume for our next number.



*Three Lectures Preliminary to a Course on the Principles and Practice of Surgery. Delivered on the 4th, 8th and 9th of Oct., 1849, before the Medical Class of the University of Pennsylvania.* BY WILLIAM GIBSON, M. D., LL. D., Professor of Surgery, &c. Published by the Class. Philadelphia: 1850. pp. 57.

The season for valedictories from our medical professors is already nigh at hand, yet we have still to regret the want of opportunity to return acknowledgments for the many interesting introductions with copies of which we have been favored.

Thankful we sincerely are for each of these annual offerings from the professorial rostra; and we would be unfeignedly glad to vary and enrich our pages with many portions of their polished treasures, could we do so without trenching on the rights of more urgent, although not more tempting, claimants. As it is, we have surrendered, for the nonce, to Dr. Gibson's three "preliminary" lectures; not so much on account of the triple debt of gratitude their numerical excess has put us under, as for the refreshing entertainment their perusal has afforded us in the midst of melancholy heaps of drier food for thought.

They belong to a class of introductory discourses which must always find a cordial welcome amongst all hearers and readers of whatever predilections, and one which we of the company of official lookers-on have many reasons for regarding with peculiar satisfaction.

It is neither the information they convey, nor the agreeable form in which their matter is presented, that renders essays of this kind so eminently attractive in our view; nor is it the guaranty they suggest of a desire on the part of their enterprising authors, to master, at the fountain head and for the purposes of teaching, the latest improvements in their respective branches. Strong as these recommendations manifestly are, and great as we feel the charm must be to him who can revel *haud inexpertus* in the thousand glorious recollections roused by the graphic history of scenes and persons once familiar to his daily sight—still we attach far higher value to them for the sake of the powerful stimulus such stirring pictures inevitably give to the pursuit of knowledge in the minds of the embryo philosophers to whom they are especially addressed. Nowhere can the ambitious student meet with a source of impulse

that would urge him so irresistibly to seek the means of future advancement in a career of European observation and comparison; and nowhere could he find a more effectual inducement to emulate in his own land the most exalted efforts of the great intellects of the older and more crowded world abroad.

But these occasional remarks are fast making away with the space allotted for the special notice of the pamphlet which has given rise to them. A very brief and cursory sketch is all that need be given here of its particular contents; and we beg leave to refer to the brochure itself for a better acquaintance with its scope and character.

Suffice it to say, that the professor's object was to present, through his customary medium of introductory, a continuation of his portraiture of the celebrated medical men and institutions of England and the continent of Europe, noted by him in the course of his last tour abroad. The three lectures now before us are chiefly occupied with an account of the "prominent medical men and schools of Germany."

Beginning with a lively *coup d'œil* of Aix La Chapelle, he takes us most agreeably through Bonn and up the Rhine to Wiesbaden and Heidelberg. Sojourning at the last old town, we are favored with a life-like view of its Tiedemann, his museum, his works, his homes, his family, and his colleagues, Chelius, Henle, Nægele and others—and thus endeth lecture first.

The second lecture is devoted, first to Liebig and his fellows, Bischoff, Wehren and others at Giessen, and then to Müller, Diefenbach, and some of their associates and doings and places of resort at Berlin.

Lecture third carries us out of Germany into the land of dykes, and canals, and inimitable pictures, since we are introduced by way of Hamburg and the Zuyder Zee to Amsterdam with its worthies, its lions and its works of art. Next we have Leyden, with its famous university and anatomical collections; then Harlem and the Hague, with its unrivalled gallery of Dutch and Flemish paintings. Thence to Rotterdam, and out of Holland to Antwerp, Brussels and Paris. Here, we are told, our author took up his "abode again for several weeks, living the greater part of the time in the hospitals and in the society of the most distinguished professional men. Of these," continues he, "I had fondly



hoped, before this, to have given a full account. But alas! owing to constant and overwhelming engagements with lectures and professional duties, I have been unable to fulfil, entirely, the promise made to a former class. To make amends for this delinquency, I propose, *Deo volente*, to print the ensuing summer a new edition of my Rambles in Europe in 1839, and to add to it a full account of my late pilgrimage in 1847—trusting that both, thus brought forward in the shape of a volume, may not only prove instructive and agreeable to students and practitioners throughout our country, but serviceable, as a guide, to those who may be willing and able hereafter to visit the scenes from which I myself have derived so many advantages and so much satisfaction. In the meantime, ‘Vive vale que.’” We echo the wish. May he live a thousand years, and may the shadow of his introductions never be less!

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## THE MEDICAL EXAMINER.

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PHILADELPHIA, MARCH, 1850.

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### SYDENHAM SOCIETY.

By the late report of this Society, we learn that there have been issued during the year ending May 1st, 1849, four volumes, viz., *Rhazes on the Small Pox and Measles*; *the first volume of the complete works of Hippocrates*; *the first volume of the English edition of Sydenham*, and *the second volume of Rokitansky's Pathological Anatomy*. The council have also secured the valuable services of Dr. Fleetwood Churchill, (well known to the profession in this country as the author of a treatise on Midwifery; a work on the diseases of Women; and one on diseases of Children,) to prepare a volume of select monographs, principally by English authors, on the diseases peculiar to women. This has been already issued in England, and contains much valuable matter on the subject of puerperal fever; the whole work indeed, with the exception of about fifty pages, being occupied with this subject. Dr. Sharpey, it is also announced, will edit a volume

that will comprise the works of some of the most distinguished physiological writers of the age of Sydenham. They likewise announce that they will publish another selection from the clinical lectures of Dupuytren, on the diseases and injuries of the bones, and one volume of the British Medical Bibliography, already announced.

Our object in bringing this subject before our readers, is to direct attention to the advantages gained by membership. The great aim in the institution of this Society, was to meet certain acknowledged deficiencies in existing means for diffusing medical literature, which were not likely to be supplied by the efforts of individuals. To carry this object into effect, they propose a succession of publications, embracing, among others, reprints of standard English works, which are rare and expensive; miscellaneous selections from the ancient and from the earlier modern authors, reprinted or translated; digests of the works of old and voluminous authors, British and foreign, with occasional biographical and bibliographical notices; translations of the Greek and Latin medical authors, and of works in the Arabic and other Eastern tongues, accompanied, when it is thought desirable, by the original text; translations of recent foreign works of merit; original works of merit which might prove valuable as books of reference, but which would not otherwise be published, from the slender chance of their meeting with a remunerating sale—such as Bibliographies, alphabetical and digested Indexes to voluminous periodical publications, &c.

These works are handsomely printed and bound on a uniform plan, and distributed to the members, subject, however, to a due share of the carriage of the parcel in which the books are sent. The price of subscription is five dollars, to be paid in advance, for which every member is entitled to a copy of each work for the year for which he subscribes. The price of the subscription may be forwarded to either of the local secretaries, Dr. R. Dunglison, Philadelphia, or to Dr. Lee, New York.

Those who are desirous of becoming members can do so by transmitting their names and address, with the amount of subscription, to either of the local secretaries above named.

No one who examines into this matter, can fail to be struck with the advantages resulting from membership, in the value of the publications that have already been presented to the members, and the low rate at which they are supplied. In the last two years, eight large and handsomely printed volumes have been distributed, and the announcement for the present year gives evidence of still greater liberality on



the part of the council. We trust that their efforts to disseminate sound medical literature among the profession may meet with the success it deserves.

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Under the department of Surgery, in the Record of the present number, will be found a report of a very ingenious and successful operation for the relief of deformity from a burn, by Dr. S. P. Hullihen, of Wheeling, Va. The report was sent to us in pamphlet form, and we have been induced to present it to our readers, under the conviction that they will form as high an estimate of the judgment and surgical skill of Dr. H. as we have been led to do from its careful perusal. We have also read with much pleasure an essay on cleft palate and its treatment, and one on hare lip and its treatment, from the same source.

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#### MEDICINAL EXTRACTS.

We have received from Messrs. Tilden & Co., New York, specimens of various medicinal extracts prepared with great care and accuracy by themselves. These gentlemen have been actuated by an earnest desire to supply to the profession, at a moderate rate, such preparations as could be entirely relied upon. Of the narcotic extracts we can speak with confidence, having subjected them to a faithful trial. We believe them to be equal to the best imported or domestic articles. The mode of preparation adopted by Messrs. Tilden & Co., secures the peculiar active properties of the plant unaltered, at the same time that it preserves its flavor and color.

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#### DELEGATES TO THE CONVENTION FOR REVISING THE NATIONAL PHARMACOPŒIA.

In compliance with a resolution of the Convention for revising the National Pharmacopœia, which met at Washington on the 1st of January, 1840, the Vice President announces the appointment of the following delegates to the ensuing Convention, to be held at Washington, *on the first Monday in May*, 1850. The names are given in the order in which they were received by him.

From "the Faculty of the National Medical College," at Washington—  
PROFESSORS RILEY, MILLER, and FOREMAN.

From "the Faculty of the Jefferson Medical College" of Philadelphia—  
PROFESSORS FRANKLIN BACHE, and R. M. HUSTON.

From "the College of Pharmacy of the City of New York,"—MESSRS.  
JOHN MILHAU, GEORGE D. COGGESHALL, and JAMES S. ASPINWALL.

From the Medical Faculty of "the University of Pennsylvania,"—DRS. GEORGE B. WOOD, and JAMES B. ROGERS.

From the "College of Physicians of Philadelphia,"—DRS. JOSEPH CARSON, HENRY BOND, and FRANCIS WEST.

From "the Geneva Medical College,"—PROFESSOR JAMES M. BRYAN, M.D.

From "the New Hampshire Medical Institution,"—DRS. ALBERT SMITH, and DIXIE CROSBY.

From "the Philadelphia College of Pharmacy,"—WM. PROCTER, JR., DANIEL B. SMITH, and CHARLES ELLIS.

From "the Rhode Island Medical Society,"—DRS. USHER PARSONS, and DAVID KING.

From "the New Jersey State Medical Society,"—DRS. L. CONDUCT, and W. A. NEWELL.

From "the Faculty of the Medical Department of the University of Buffalo,"—DR. CHARLES A. LEE.

GEORGE B. WOOD,

Vice President of the Pharm. Convention of 1840.

Philadelphia, Feb. 25th, 1850.

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CHOLERA.

We regret to learn that cholera is prevailing to some extent in New Orleans. The official reports announce one hundred and eleven deaths, during the month of December, from that disease. We learn, also, that steamboats leaving New Orleans often have cases on board, especially among the emigrants. A few cases are reported to have occurred in St. Louis. Cincinnati, thus far, remains free from the disease.—*Western Lancet*.

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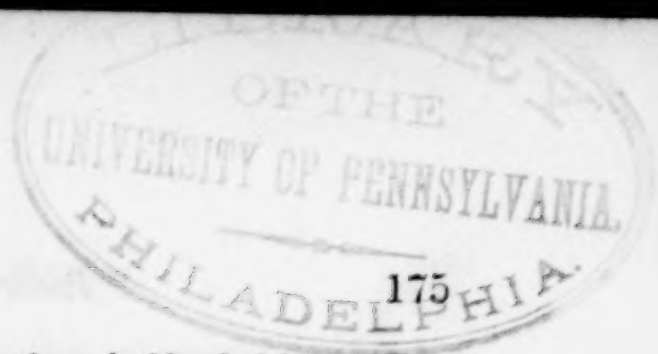
AMERICAN MEDICAL ASSOCIATION.—THIRD ANNUAL MEETING.

In consequence of a delay, up to the present time, in the distribution of the Transactions of the second meeting of the Association, held at Boston in the month of May, 1849, the *Standing Committee of Arrangements*, appointed at that time, deem it expedient to give public notice, through the medical periodical press, that the next meeting will be held in Cincinnati, on Thursday, the 7th of May, ensuing; and, at the same time, they wish to make known to the physicians, who reside in portions of the United States from which few or no delegates have yet been sent, the terms of membership. This they will do, by copying a part of the second article of the Constitution:

"*The Delegates* shall receive the appointment from permanently organized medical societies, medical colleges, hospitals, lunatic asylums, and other permanently organized medical institutions of good standing in the United States. Each delegate shall hold his appointment for one year, and until another is appointed to succeed him, and shall participate in all the business and affairs of the association.

"Each local society shall have the privilege of sending to the association one delegate for every ten of its regular resident members, and





one for every additional fraction of more than half of this number. The faculty of every regularly constituted medical college or chartered school of medicine, shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital containing a hundred inmates or more, shall have the privilege of sending two delegates; and every other permanently organized medical institution of good standing, shall have the privilege of sending one delegate.

"*The Members by Invitation* shall consist of practitioners of reputable standing, from sections of the United States not otherwise represented at the meeting. They shall receive their appointment by invitation of the meeting after an introduction from any of the members present, or from any of the absent permanent members. They shall hold their connection with the association until the close of the annual session at which they are received; and shall be entitled to participate in all its affairs, as in the case of delegates.

"*The Permanent Members* shall consist of all those who have served in the capacity of delegates, and such other members as may receive the appointment by unanimous vote.

"Permanent members shall at all times be entitled to attend the meetings, and participate in the affairs of the association, so long as they shall continue to conform to its regulations, but without the right of voting; and when not in attendance, they shall be authorized to grant letters of introduction to reputable practitioners of medicine residing in their vicinity, who may wish to participate in the business of the meetings, as provided for members by invitation."

The Committee desire, still farther, to give notice that it is their duty to receive and present the reports of any of the standing Committees, whose members cannot attend the meeting; and all communications on scientific subjects, which gentlemen, not members of the Association, may desire to lay before it.

It is likewise, their duty to examine the credentials of delegates and register their names, which it is desirable should, as far as possible, be done before the meeting of the Association, for which purpose the Committee will meet on the preceding day.

In conclusion, the Committee indulge the hope, that this first meeting in the interior of the continent, will be well attended by its physicians, and all who cultivate the sciences auxiliary to medicine; that no society, college or hospital will remain unrepresented; and that many distinguished physicians, not appointed as delegates, will attend and become members by a vote of the Association.

DANIEL DRAKE, M. D., *Chairman*.

D. P. STRADER, M. D., *Secretary*.  
*Cincinnati*, Jan. 31, 1850.

*Ibid.*

## RECORD OF MEDICAL SCIENCE.

## ANATOMY AND PHYSIOLOGY.

*An Account of a Chemico-Gelatinous Injection, with the method of employing it in Anatomical Preparations.* BY HENRY GOADBY, Esq., F. L. S., late dissector of Minute Anatomy, to the Royal College of Surgeons, of England.

At the latter part of the year 1841, I was desirous of making a series of minutely-injected preparations to illustrate the peculiar arrangement of the capillary vessels in the different tissues of the human subject. My experience of the materials usually employed for this purpose—i. e., common size, or parchment size, colored with vermillion, left but one impression on my mind—viz., that the particles of the finest vermillion are too coarse to pass through the capillary system. Occasional patches of tissue are met with, *beautifully injected*, while all around is a mass of extravasation, and this remark applies especially to *fœtal* subjects.

Prior to the above date, M. Gruby published an account in the *Comptes Rendus* of some very successful injections which he had made by employing certain fluids, which he used separately, and which, when they met, mutually decomposed each other, and deposited the coloring matter in the vessels themselves.

He used saturated solutions of the chromate or bichromate of potash, and of the acetate of lead: he directed that equal quantities of these fluids should be used, first injecting all the chromate of potash, to the extent of one half the quantity of injection supposed to be necessary, into the vessels, and subsequently the same quantity of the acetate of lead.

As soon as these fluids meet, they decompose each other; the acetic acid of the acetate of lead combining with the potash to form the acetate of potash, which is set free, and the chromic acid of the chromate of potash combining with the lead to form the beautiful chromate of lead, which is deposited in the vessels.

The reports which had reached me were highly confirmatory of M. Gruby's success with these fluids, and having seen Mr. Bowman's preparations of the kidney injected on this principle, and with the like materials, I determined to employ them. My experiments, however, were most unsatisfactory, for, having injected a terrier puppy, a dissection of several hours was required to ascertain whether I had succeeded in injecting any part or not, and my best reward consisted in a patch of capillaries, slightly painted of a pale yellow color, and entirely wanting that roundness and fulness, characteristic of a good injection.

I next procured a human fœtus, and injected it, with precisely the same results.

On making inquiry of Mr. Bowman, touching the ordinary success which had attended his experiments, and the experiments of others, so far as he knew, he told me that I appeared to have met with fair average results, for that the labor of dissecting, consequent on using these



fluids, was always great, and that the operator must consider himself well rewarded for two or three days' work, by finding a microscopic bit well injected.

From this narration of failures, it will be evident that the fluids *rarely meet* in the vessels, otherwise the color would be necessarily precipitated. With a view to see exactly what took place, I determined to inject a piece of intestine, in which the whole process would be under my inspection. I placed pipes in the mesenteric veins, and secured all the cut vessels in the usual manner; I then proceeded to throw in the chromate of potash, and found that the potash would not wait for the lead, but came out instantly through the parietes of the vessels as fast as it went in, and in one broad stream covered the table. I repeated this experiment a number of times, but with the same uniform result; on some occasions I threw in the lead also, and as the vessels were moist with the chromate, the slight painting I have mentioned took place; but as only equal quantities of the two fluids produce the best color, the excess of the lead was useless.

Having observed, at this stage of my experiments, that the precipitated chromate of lead is remarkably fine and soft, I determined to use it, in lieu of vermillion, with size; and although the success was far greater than when I used the fluids separately, the results were in no way superior to the old red injection.

The principle involved in M. Gruby's use of these fluids: that, namely, of forming the color within the vessels themselves, appeared to be undeniably good, notwithstanding it had so signally failed in my hands, and, as far as I could learn, in the hands of all those persons who had hitherto employed it; and I had no doubt that if I could succeed in giving some consistence to the fluids, the results might prove more satisfactory. For this purpose, size would not do, as it is rarely, when bought, much too strong for use, and it would not bear further dilution. I therefore procured the highly concentrated preparation employed by pastry cooks, and sold by grocers, under the name of gelatine. The following is my formula for the double injection with this material:—

Sat. solution of bi-chromate of potash, eight fluid ounces; water, eight ounces; gelatine, two ounces.

Sat. solution of acetate of lead, eight fluid ounces; water, eight ounces; gelatine, two ounces.

Thus, gelatine, two ounces, are dissolved in sixteen ounces of fluid, and kept and used separately as before; but the success consequent on the addition of the gelatine was quite extraordinary; the vessels were all full and round, and there was no extravasation; and for reasons hereafter to be explained, the microscope revealed scenes so rich in depth, color, and beauty, as to exceed the best red injections I have ever seen.

With this form of injection I have never failed; I have injected three foetal subjects so minutely, that the capillaries of the skin, and of every tissue, were perfectly injected. Amongst the best specimens I obtained, I may mention injections of the papillæ of the lips, gums, and tongue;

of the pulps and capsules of the teeth ; of the conjunctivæ and other tissues of the eye ; of the mucous membrane of the nose and cellular tissue ; fascia ; periosteum, &c. ; ceruminous glands, lymphatic glands, and thyroid glands ; pericardium, auricles of the heart, vasa vasorum, particularly of the aorta and vena cava, and the vessels of all the nerve sheathes. In fine, one fœtus occupied me in dissecting, ten hours a day, for two months, and was scarcely half finished at the expiration of the time.

Having described the success attending the use of these injecting fluids, I must now say how they are to be mixed and used, as everything depends on care in these respects.

Each parcel of gelatine must be dissolved in the water only, (eight ounces,) and in a separate water-bath. The water-baths I employ, consist of two earthen pans, such as are applied to a child's chair, and capable of containing about one quart each ; these are fitted to two tin kettles, the broad flange of the earthen pan resting on the rim of the kettle, the pan covered with a common saucepan lid. The kettles should be furnished with a bail of iron wire, like that of a glue-pot, or pitch-kettle.

The gelatine is to be slowly dissolved in the eight ounces of water ; when this is accomplished, the eight fluido unces of bi-chromate are to be added to the gelatine in one pan, and the eight fluid ounces of acetate of lead to the gelatine in the other ; each should be well mixed by stirring with a glass rod, a separate rod being used for each solution, lest the chromate of lead should be precipitated.

The fluids thus prepared, must then be strained through fine flannel (using a piece for each fluid) into other vessels, the earthen pans cleaned, and the fluids returned to them. The injections are now ready for use, and must be kept at a temperature of about  $90^{\circ}$  by the warm water contained in the kettles.

*Directions for Using the Injection.*—The best subject to inject is a fœtus, as there are no cut vessels by which the injection can escape. A pipe, with a stop-cock attached, should be firmly tied in the umbilical vein, leaving the arteries open until the yellow injection makes its appearance, when they should be secured. It is most essential that, for this injection, the subject be warmed through by immersion in warm water, the temperature of which must not be higher than  $90^{\circ}$ , or corrugation of the tissues will take place ; it will require from one hour to two hours to accomplish this, and the temperature must be maintained until the injection be completed. The whole sixteen ounces of the potash preparation of gelatine must now be used, care being taken that its temperature never exceed  $90^{\circ}$ . Some manipulators deem care of little import in the early stage of injecting, and throw in the first few syringefuls rapidly, and only exhibit caution when the subject begins to fill. In my experience, this is an error ; and he who would succeed must be equally careful and patient throughout. It is my practice to let the piston descend so slowly, that it can scarcely be seen to move.

Having used the whole of the first preparation, the acetate of lead



must be used, when the color will instantly be formed, and give the operator some idea of his progress.

The temperature of the subject must be kept up, and a fresh batch of injection made and strained as before. In about half an hour the injection may be resumed, and the bi-chromate again claims precedence; but only half the quantity need be used now, followed by an equal quantity of the lead. At this point the stop-cock should be turned, and the subject again allowed to rest for half an hour; the remainder of the injections may then be used, and after this, in all probability, the subject will require another batch. The manipulator who employs for the first time, as much injection for a fœtus as I have already directed to be used, and who experiences the great resistance opposed to the transmission of the last several syringefuls, especially as the body will by this time be swollen and tense to an amazing degree, will feel somewhat surprised to learn, that if he suspend the operation for an hour, keeping up the temperature in the meanwhile, he will be able to throw into the subject twenty or thirty ounces more with comparative ease, and have the pleasure of seeing many isolated congeries of vessels of the skin gradually approaching each other, and finally anastomosing most perfectly, while the tension of the body will be so great, that if the piston be pressed completely down, and the hand withdrawn, it will gradually rise, and the same may, with care, be repeated several times, without causing extravasation.

Towards the conclusion of the process, the injections should be thrown in alternately; and this should be continued, notwithstanding the prodigious distortion of the body, as long as the injection is felt to flow in the vessels. To inject a fœtus well, on this plan, will occupy from four to five hours. The operation finished, the body should be thrown into cold water, and should not be dissected until the next day.

*The Dissection.*—Will soon reveal what has become of the injection, and is altogether a disagreeable and difficult task. It will be found that nearly all the gelatine and acetate of potash have transuded and separated the tissues widely from each other, and that the blood has been diluted, and intimately mixed with the gelatine, which is colored by it.

The majority of preparations thus injected, require to be dried, and mounted in Canada balsam. Each preparation, when placed on a slip of glass, will necessarily possess more or less of the colored infiltrated gelatine, which, when dry, forms, together with the different shades of the chromate of lead, beautiful objects, possessing depth and richness of color. The gelatine also separates and defines the different layers of vessels. By this injection, the arteries are always readily distinguishable, by the purity and brightness of the chromate of lead within them, while the veins are detected by the altered color imparted by the blood.

Those preparations which require to be kept wet, can be preserved perfectly in my B fluid, specific gravity 1,100; the A fluid destroys them. I regret much that a gentleman, (now deceased,) Alexander Nasmyth, Esq., for whom I prepared a great number of such injections, had no faith in my preserving fluids at that time, and employed a chemist to

prepare a fluid for the preservation of these yellow injections, which has quite destroyed some of the most beautiful preparations I have ever seen, while some of the fellow parts in my possession, are as perfect now as they were seven years ago.

I would recommend, that the slips of glass employed for the dry preparations be instantly inscribed with the name of the preparation, written with a diamond, for, when dry, it is very difficult to recognise one preparation from another, until the operator's eye be educated to the effects of this chemico-gelatinous injection. Where so much wet abounds, gummed paper is apt to come off.

When dry, it is sufficient for the purpose of brief examination by the microscope, to wet the surface of a preparation with clean oil of turpentine; immediately after examination, it should be put away carefully in a box, to keep it from the dust, until it can be mounted in Canada balsam.

The bi-chromate of potash is greatly superior in color to the chromate, which yields too pale a yellow; and subsequent experience has convinced me that the acetate of potash frequently effects its liberation by destruction of the capillaries, and this, even long after the preparations have been mounted in Canada balsam; perhaps this may be owing to some chemical action of the acetate of potash upon them.

I would suggest the substitution of the *nitrate* for the *acetate* of lead, as we should then have, in the liberated nitrate of potash, a valuable auxiliary in the process of preservation.

Although highly desirable, as the demonstrator of the capillaries of *normal* tissues, I do not think this kind of injection fitted for morbid preparations, the infiltrated gelatine producing appearances of a puzzling kind, and calculated to mislead the pathologist.

In preparing portions of dried, well-injected skin for examination by the microscope, I have tried the effect of dilute nitric acid, as a corroder, with very good results. But probably, liquor potassæ would have answered this purpose better.

When size injection is to be employed, colored either with vermillion or the chromate of lead, the animal should be previously prepared by bleeding, to empty the vessels; for if they be filled with coagulated blood, it is quite impossible to transmit even size, to say nothing of the coloring matter. Hence the difficulty of procuring good injections of the human subject.

But with the "chemico-gelatinous" injection no such preparation is necessary; and success should always be certain, for the potash liquefies the blood, while constant and long-continued pressure by the syringe drives it through the parietes of the vessels into the cellular tissue. The large quantity of infiltrated blood—the invariable concomitant of my process—characterizes this from all other modes of injecting, and is a distinctive feature of these preparations.

I find that a very superior preparation of gelatine is now on sale at the grocers' shops, nearly equal in appearance to isinglass. From its apparent purity, I am led to infer that a less quantity of it would suffice for the number of fluid ounces mentioned above.



The only preparations of gelatine extant when I made the experiments recorded in my paper, contained a large quantity of dirty, insoluble gluten, from which defect I venture to assume the French gelatine is free.—*London Lancet*.

*On the Decomposition of the Bile of the Ox.* By DR. BUCHNER, jun.—M. de Gorup-Besanez, has been for some time studying, in Dr. Buchner's laboratory, the series of alterations which the bile undergoes when removed from the economy. The mucus of the bile first becomes decomposed, and supplies a ferment which determines the decomposition of the fluid itself, the products of which fermentation bear a strong analogy to those which result from the action of acids and alkalies on the bile. Thus, by the action of hydrochloric acid, the essential portion of the bile is decomposed into *choloidic acid*, which is precipitated, and into two neutral and crystallizable bodies, *glycocoll* and *taurine*, which remain dissolved with the chloride of soda, &c. Under the operation of alkalies, in the place of *choloidic acid*, there is formed the *cholic* of Demarcay (the *chololic* of Strecker); and if a strong alkali be employed, as caustic potass, in place of glycocoll and taurine, we have the products of their decomposition—ammonia, &c. So, too, after the first period of the putrefactive fermentation of bile, which is terminated in from four to six weeks, beautiful crystals of taurine may be separated; and a resinous precipitate produced by the action of acids, after separating the fatty matters from the residue, and redissolving it in water, is found to be of the same composition as *choloidic acid*; while, if the bile has been fermented at a low temperature, crystals of *chololic acid* are produced—these two acids, indeed, only differing from each other by one equiv. of H. O. Another product due to the formation and decomposition of *glycocoll*, is ammonia, the greatest portion of which escapes during evaporation. Thus, the first phasis of the fermentation, which may be called the *bilic* fermentation, furnishes—

1. Ammonia, } Products containing all the azote, and all the sulphur
2. Taurine, } of the fermented bile.
3. The resinoid choloidic or chololic acid, combined with soda and ammonia, and precipitable by a stronger acid.

A further fermentation, which may be called the *tauric*, is effected at the expense of the taurine. Prisms of *sulphate of soda* are soon observed, and as this salt does not exist in the fresh bile, it can only result from the decomposition of the taurine, the only sulphurous body formed during the *bilic* fermentation. The quantity of taurine gradually diminishes *pari passu* with the increase of that of this salt, which eventually entirely displaces it. The same is observed in bile which has been purified by concentrated alcohol, in which the sulphates, owing to their insolubility could not have existed. The *sulphate* is not produced directly from the decomposition of the taurine, but by the successive oxidation of the hyposulphite, or sulphite which is so. In putrefied bile, too, we may always detect acetic acid, and other volatile

acids of analogous composition, especially valerianic.—*Brit. & For. Med. Chir. Rev. from Jour. de Pharmacie.*

*On the Nature of the Gastric Juice, and the Changes it Effects on Nitrogenized and Unnitrogenized Food.* By H. BENICE JONES, M. D., A. M. Cantab., F. R. S., Physician to St. George's Hospital.—On the 5th of March, 1849, breakfast having been taken at eight A. M., on boiled beef, bread, and spring water, at 9.45, by position and voluntary effort, about a pint of substance was ejected. The first ounces were scarcely acid to the taste; the last portion was most intensely acid. The whole quantity was thrown on a filter, and a clear, yellowish-brown liquid passed through. This clear liquid was intensely acid to test paper. It coagulated slightly on the addition of nitric acid and heat. The cold acid caused a deepish yellow color and a coagulum, which appeared partly to be soluble by heat, and precipitable by cooling. The specific gravity = 1008.2. 504.1 grains, evaporated in vacuo over sulphuric acid, evolved a small quantity of gas.

Residue + basin = 549.3 grains.

basin = 505.0 “

March 15th.—Residue ... = 44.3 grs. = 8.8 per cent.

The residue was yellowish, semi-transparent, took the impression of the nail, smelt of musk and sugar!! When mixed with cold distilled water, it became ropy, and very adhesive. The solution was highly acid. The taste was sweet, acid, bitter, nauseous. A few drops of the solution, with sulphate of copper and liquor potassæ, gave an intense blue, with a trace of purple; and the reduction of the oxide of copper was very rapid, excessive, and red.

In this bottle you see this gastric juice. Here is its strong acid reaction on litmus, and here you see the rapid reduction of the oxide of copper. The food being bread, it is probable that some of the sugar was formed in the process of fermentation, and not produced altogether in the stomach.

This gastric juice, then, is a highly acid fluid secreted by the stomach. It consists—1, of water and free acid; 2, of salts; 3, of non-nitrogenous organic substances; 4, of albuminous or nitrogenized substance. Of these substances, the most important is the free acid. What acid, it has not yet been determined. Hydrochloric, phosphoric, acetic, lactic, and butyric acids have each been said to exist in the gastric juice. The hydrochloric and phosphoric are mineral or inorganic acids. The rest are organic acids,—possibly arising from starch, sugar or fat, or other components of the non-nitrogenized part of our food. Thus these organic acids might be formed; but whence can the inorganic acids come? Hydrochloric and phosphoric acids exist only in the food and blood, combined with soda, potash, or lime; as in common salt, phosphate of soda, or phosphate of lime. To set free the acids, the alkalies must be separated. If one equivalent of hydrochloric acid is set free in the stomach, one equivalent of soda must be set free in the blood. The greater the quantity of acid in the stomach, the greater the quantity of alkali in the blood, and



the more alkaline the serum must become. Whether this is effected by galvanic action, nervous action, or muscular action, is at present altogether unknown. Those who say anything, say it is by vital action. Whatever may be the nature or seat of the decomposing force,—whether galvanic, nervous, or muscular,—whether in the cells of the epithelium of the stomach-tubes, or in the muscular structure,—we cannot admit that inorganic acid can be poured into the stomach without an equivalent quantity of alkali being set free in the blood, when digestion is completed, the acid is re-absorbed with the food, and the alkalescence of the blood must be altered in the opposite direction. When the stomach is empty, there is little, if any acid there then. When food is taken, the quantity of acid begins to increase, and gradually reaches the greatest amount poured out; and then by absorption, or by escape through the pylorus, the quantity of acid begins to decrease, until the stomach is again empty.

For the purpose of keeping up a constant supply of at least one inorganic acid, man has been led at all times, and in all circumstances, to seek for salt, as necessary to his existence. What the influence of chloride of sodium undecomposed, and of other salts, is on the solubility of albumen or starch, has not yet been sufficiently determined.

The next most important constituent of the gastric juice, after water and acid, is the albuminous substance. Its exact nature is not known. I cannot consider it as epithelium. It is far more likely to be a substance like diastase; not albumen, not epithelium, but a peculiar albuminous substance. Its exact composition is not known; but probably it is a substance undergoing changes which it can communicate to other contiguous substances. It was precipitated by a weak alcohol from infusion of pig's stomach, by Wasman, and he called it pepsin; it requires re-examination.

The non-albuminous organic substances in the gastric juice, are the organic acids and fatty substance; the latter probably exists in a very small quantity. This complex gastric juice cannot act precisely in the same way on two classes of substances so very different as nitrogenized and non-nitrogenized food.

Firstly. *The action of the Gastric Juice on the Nitrogenized substances in the Food.*—The fine state of division of the food, the smallness of its amount, the constant muscular motion of the stomach, and the temperature of the body—these all assist the solution of the fibrin, albumen, or casein. Strong acids very easily dissolve these albuminous substances, and the dilute acid of the stomach, in consequence, perhaps, of some influence of the nitrogenized pepsin, or animal diastase (?), is made to act as energetically on the albuminous food, as strong acid would do. In this action there is nothing vital; it takes place as well out of the body as in it. The elements of the albumen cannot be converted so as to form water, salts, sugar or fat. There is no formation of incipient albumen. If you please to call solution, reduction or combination of water with the substance dissolved, you may say the albumen is reduced; to me it is far more simple and quite as comprehensible to speak of it as a process of solution, and as nothing else.

Secondly. *On the Action of the Gastric Juice on Non-Nitrogenized Food, Starch, Sugar, Fat, &c.*—Starch is perfectly insoluble in water and in dilute acids, but by the action of dilute acid, it easily undergoes a change, by which it is rendered soluble. The action of strong sulphuric acid on starch, and the formation of sugar thereby, is probably well known to you already; but there is no strong acid in the stomach.

The relation of starch to British gum, or dextrine, or, as it has been called, soluble starch, is also well known to you. There are many ways of changing the insoluble starch into soluble dextrine. One very perfect method has been practiced in France, of treating the starch, at the temperature of 100° Fahr., with dilute hydrochloric or oxalic acid, and thus dextrine is readily formed. There is no doubt that the temperature and dilute hydrochloric acid in the stomach effect the same conversion as you see has been effected in this flask; further action of the acid and heat, converts the dextrine into sugar. It has been said, that the starch is acted on by the alkaline saliva, but directly the saliva reaches the stomach, it must be neutralized by the gastric juice.

*On the Action of the Gastric Juice on Sugar.*—The ready solubility of sugar in water requires no illustration. A portion of the sugar which is taken as such, or is formed from starch in the stomach, without doubt passes into the blood as sugar; but it appears to me highly probable, from Fremy's experiments, that a portion is changed into some of the vegetable acids. The acetic and lactic acids may thus be formed, and these, in part, perhaps may become lactates and acetates of soda in the blood. And we know, from direct experiment, what happens to vegetable acid salts injected into the blood, or taken into the stomach; they are oxydized or burnt, giving heat and carbonic acid salts, which pass off in the urine. All free vegetable acids are probably changed partly into carbonic acid in the blood. Thus, then, probably the progress of a grain of starch may be traced. It forms, first, dextrine; secondly, sugar; thirdly, vegetable acid; fourthly, carbonic acid.

The ascending conversion of sugar into albumen cannot be admitted until it is proved. There is not an experiment which renders such a change probable.

The descending conversion of sugar into fat, a substance also containing no nitrogen,—that is, of one kind of non-nitrogenized substance into another kind belonging to the same class, is most fully proved. Bees fed on crystallized sugar made wax, and animals form more fat than the food they are fed with contains; but this fat is not formed in the stomach, and therefore does not concern us now. The changes take place in the minute textures of the body, and not in the stomach.

*On the Action of the Gastric Juice on Fat and Oil.*—How is fat made soluble at the temperature of the body? Is oil absorbed? The following is an experiment by Tiedemann and Gmelin. A dog was fed for four days on butter; three hours after the last meal he was killed.



*a.* Stomach, contained butter, and the contents were very acid. *b.* Small intestine contained butter and bile, and was acid strongly. *c.* The cæcum contained butter. *d.* The rectum contained butter. *e.* The chyle was very milky, and cleared with ether. *f.* The blood of the vena cava inferior contained much fat. *g.* The urine was thick; filtered, butter soluble in alcohol was left on the filter. They add: "One of our pupils, who likes fat, has frequently found it in his urine." This has also sometimes been observed after cod-liver oil. Oil and albumen form an emulsion slightly soluble in water; but the pancreatic fluid and the bile are generally considered as the agents which make the fat and oil of the food soluble.

Lastly, the phosphates and sulphates of soda, chloride of sodium, are soluble in water. The earthy phosphates are dissolved by the hydrochloric acid. Even silica, in minute quantity, is contained, dissolved in water, and hence these salts pass into the blood.

The formation of the gastric juice is certainly no chemical process, but its action is entirely chemical, though it is aided by the motion which the muscular coat of the stomach produces; and muscular contraction is as distinct as sensation from chemical action. Nor can the absorption of the dissolved substances be altogether considered as a vital action. It is certainly subject to the laws of the diffusion of one liquid into another, to the laws of endosmosis, or diffusion through a membrane, and to capillary action. This subject, alone, might occupy me for many lectures; it belongs more to my colleague, the lecturer on physiology, than to me. I pass on, therefore, to the next subject, the formation of blood from the absorbed food, the assimilation of the food to the blood, How is it that the blood keeps its composition? The food is dissolved, and then absorbed, and the blood somehow makes it into blood; somehow preserves its own composition. What, then, is this blood, chemically? how does it differ from food in composition?—*Lon. Lancet.*

## MATERIA MEDICA AND THERAPEUTICS.

*M. Recamier's Aloetico-Febri-fugic Elixir.*—The obstinacy of certain intermittent fevers and neuralgic affections is familiarly known, and when it is sought to contend against this by largely increasing the dose of quinine, very mischievous results sometimes follow, especially in persons of constipated habit, who then often suffer from long-continued disturbance of the sight and hearing. The following formula devised by M. Recamier, has, in his hands, and in those of various other practitioners, been found of great utility in these cases:

Powdered socotrine aloes,	-	-	6 parts
Picked myrrh,	-	-	6 "
Rum,	-	-	150 "
Alcohol,	-	-	20 "

Macerate for twenty-four hours, and add to the filtered liquor—

Sulph. quinine (previously acidulated)	6 parts
Sydenham's laudanum	2 "

The dose is a teaspoonful for children, and a tablespoonful for adults.

The patient should keep himself warm in bed, after each dose, and should abstain from drink for at least two hours. In rheumatic affections, additional advantage is derived by adding four parts of powdered colchicum bulbs.—*Brit. and For. Med. Chir. Rev. from Jour. de Phar.*

*On the Treatment of Psoriasis and Lepra Vulgaris.* By M. EMERY. M. Emery states, that when appointed to the St. Louis, several years ago, he tried all the various remedies so warmly recommended by authors, and of all these *arsenic* proved the best internal medicine; but besides the inconvenience which it sometimes gave rise to, its operation was very slow. The external use of *strong tar ointment* ( $\frac{1}{3}$  to  $\frac{1}{4}$  of tar) produces, in fact, a far more rapid cure than any other means. Of from 1500 to 1800 patients who have employed it, five sixths have been rapidly cured, and that without any ill consequence, or any greater frequency of relapse than after internal means. In 228 cases of psoriasis, the arsenic and tar were used conjointly, and 200 were cured within two months. Of all the preparations of *mercury*, the *protiodide* is alone efficacious ( $\frac{1}{8}$ ); but it excites much irritation of the skin, and if applied to large surfaces, produces salivation. The *iodide of sulphur* is useful in psoriasis of the head; but if applied to large surfaces produces erysipelas. The conjoined use of the arsenic and tar-ointment constitutes, in fact, the best medication. In a disease so apt to recur, the greatest attention to diet is essential; and on the least symptom of recurrence, resort should be had to medicine, without waiting until it has become very bad. Before commencing, the patient takes a bath, and rubs in the ointment with gentle friction three times a day. In two or three days the strength of the ointment and activity of the friction are increased; and when the disease is of old standing, linen rags smeared with the ointment are to be kept applied. A tepid bath is taken once or twice a week. It is only in very irritable skins that the treatment is interrupted by the appearance of impetiginous pustules or furunculi. In about ten days we perceive, where the squamæ have fallen, a whitish circle circumscribing the patches, and extending from the circumference towards the centre. This is a sign of a decrease of the disease, which usually disappears in two or three months. With respect to the arsenic, we should begin with five drops of Fowler's solution, in four ounces of sugared water, which are to be divided into two doses. Every other day the dose is to be increased a drop, until twelve are reached. If we observe that the patches are becoming thinner, and acquiring a blackish-gray colour, this is a sign of saturation, and the dose is not to be increased; but even when this is not present, it is rarely proper to go beyond twelve or fifteen drops. Sometimes the skin becomes hot and painful around the patches; but this is relieved by tepid lotions, demulcent drinks, and diminution of the dose. After twelve or fifteen drops are reached, a feeling of constriction of the throat, or severe pain of the stomach, is perceived; and then the medicine should be suspended for a day or two, and recommenced *de novo* with the small dose. Pain near the heart, with palpitation, sometimes renders venesection requisite. If any contraction of the extensors of the limb is observed, the medicine must be at once abandoned; and as soon as the



blackish-gray colour of the patches appears, which announces saturation and an approaching cure (though such spots may remain for months,) the arsenic must be discontinued.—*London Med. Gaz. from Comptes Rendus.*

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*On Aconite in Dysentery.* By M. MARBOT.—M. Marbot, surgeon-major of the Crocodile man-of-war, found himself in the midst of an epidemic of dysentery, a few days after the vessel had left Zanzibar, nearly every one on board being sooner or later attacked during its two months' continuance. At first a condition of *embarras gastrique* prevailing, the cases were successfully treated by ipecacuanha and sulphate of soda; but the vessel returning into the warmer latitudes, the affection assumed an inflammatory type. There was intense fever, hard, contracted, rapid pulse, violent headache, a dry and bitter mouth, though the tongue was flattened and not much loaded; tenderness of the abdomen, colic, distressing pulsation in the right hypochondrium, and tenesmus were present. The emetico-purgative plan now entirely failed, and M. Marbot feared the necessity of bloodletting, of the general inutility of which, in hot climates, he had had frequent opportunities of judging. He however bethought himself of *aconite*, from which he had derived great benefit in acute rheumatism. Its effects quite surpassed his expectations, for the inflammatory excitement subsided in less than a day, and the blood disappeared from the stools in a few hours. From this time he gave the remedy even from the commencement of the disease, and he always found it remove the hemorrhage and abate the fever, the pain in the belly, too, becoming relieved, and the stools passing easier, even a few hours after the first dose. But the aconite exerts no other effects upon the stools than removing the blood from them, their mucous, glairy, &c. characters continuing as before, and even their number not undergoing a diminution proportionate to the improvement of other symptoms. The aconite, then, would seem to exert a very feeble action on the intestinal contractions, but promptly subdues the febrile reaction and the excitement produced in the various organs. The dose required is not large, being but from five to ten centigrammes of the extract in the twenty-four hours, diluted in water, and given in fractional portions every two or three hours.

The aconite does not *cure* the dysentery, but so modifies its nature, as to render it amenable to treatment that before proved useless. Thus, as soon as the reaction is reduced, M. Marbot has at once recourse to ipecacuanha, allowing a day to intervene between each dose. After the stools become somewhat reduced in number, we may follow up the advantage, by the use of the starch and opium clysters. Mercury should be substituted for ipecacuanha, when hepatitis or a disturbance of the secretions of the liver or pancreas is present, and the stools are found green, opaque, or foamy, i. e. muco-purulent. Opiates are useful only after the above-named remedies have produced their effects, and are injurious as long as any inflammatory action is present. Quinine is useful in hot climates, when the disease is masking a remittent.

Upon these principles M. Marbot treated his 300 cases, some of

which were of the severest character, and others attended by relapses, without losing a patient. A trial made in Paris of this remedy leads to the belief that it may be advantageously used to render the evacuations in dysentery and diarrhœa less irritating, and for the relief of the febrile reaction set up at the end of phlegmasiæ. The extracts prepared from the plant growing near Paris, and from that growing on the Alps, differ so much in activity, that it is recommended whenever the extract seems not to avail, to substitute the tincture, as a more certain preparation.—*Brit. and For. Med. Chir. Rev. from Bulletin de Therapeutique.*

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### SURGERY.

*Case of Elongation of the Under Jaw, and Distortion of the Face and Neck, caused by a burn, successfully treated.* By Dr. S. P. HULLIHEN, of Wheeling, Va.

Miss Mary S——, aged 20, daughter of the Hon. Wm. S——, of Ohio, came to Wheeling in the spring of 1848, to obtain relief from the effects of a very severe burn, which she had received fifteen years before.

The burn was principally confined to the neck and lower part of the face, and its cicatrix produced a deformity of the most dreadful character. Her head was drawn forward and downward—the chin was confined within an inch of the sternum—the under lip was so pulled down that the mucous membrane of the left side came far below the chin—the under jaw was bowed, slightly downward, and elongated, particularly its upper portion, which made it project about one inch and three-eighths beyond the upper jaw. In front there was scarcely any appearance of either chin or neck; she was unable to turn her head to either side; the cheeks and upper lip were dragged considerably downward; she could not close her eyelids; she could not bring her jaws together but for an instant, and then only by bowing her head forward; she was unable to retain her saliva for a single instant, and, as might be expected, her articulation was very indistinct.

She had been taken to the city of New York, some years before, for the purpose of being relieved of this deformity, and was placed under the care of two of the most distinguished surgeons in that city, as I was informed by her father, who performed an operation of dissecting up the cicatrix on the neck, then raising the head, and sliding up the cicatrix from its original position, leaving a raw surface below to heal up by granulation. I need scarcely add that the operation was entirely unsuccessful.

After a careful examination of the case, it became evident that such a complicated deformity could be best remedied by performing three separate operations: one upon the jaw; another upon the neck; and a third upon the under lip.

To remove the projection of the under jaw seemed to require the first attention. Unless that could be done, the other operations, however successful, would add but little if any to the personal appearance



of the patient. This lengthening of the jaw had taken place entirely between the cuspidatus and first bicuspid tooth of the right side, and between the first and second bicuspid of the left. By this elongation, the teeth just described were separated on both sides about three-fourths of an inch. To saw out the upper edge of these elongated portions of the jaw, and then to divide that part of the jaw in the front of the spaces thus made, by sawing it through in a horizontal manner, so as to permit the upper and detached portion to be set back in its proper and original position, appeared to be the only possible way of remedying the deformity. This plan I therefore adopted, and performed the operation on the 12th day of June in the manner now to be described.

The operation was commenced by sawing out, in the V shape, the elongated portions, together with the first bicuspid on the left side, each section extending about three-fourths of the way through the jaw. I then introduced a bistoury at the lower point of the space from which the section was removed on the right side, and pushed it through the soft parts, close to and in front of the jaw, until it came out at the lower point of the space on the left side. The bistoury was then withdrawn, and a slender saw introduced in the same place, and the upper three-fourths of the jaw, containing the six front teeth, was sawed off on a horizontal line ending at the bottom of the spaces before named, (see Fig. 1,) the detached portions being still connected, on the outer and

Fig. 1.



inner sides, to the jaw below, by the soft parts. After having, with the bone-nippers, removed from the detached portion the corners which were created by the horizontal and perpendicular cuts of the saw, it was set back so that the edges, from which the V

Fig. 2.



shaped sections were removed, came together as represented in Fig. 2, Thus it will be perceived that this portion of jaw and teeth, which before projected and inclined outward, now stood back and inclined inward, and in its proper and original place.

In this position the jaw was secured, by passing ligatures around the cuspi-

dati in the detached portion, and the now adjoining bicuspid in the sound portion. Then taking an impression of the jaw in very soft wax, a cast was procured, and a silver plate struck up and fitted over the teeth and gum, in such a manner as to maintain the parts in that same relation, beyond the possibility of movement.

The patient declared that the operation gave her little or no pain.

Fig. 3.



the operation was performed. (Fig. 3 represents the manner of closing the jaw before the operation. Fig. 4, after the operation.)

Fig. 4.



There was a little swelling about the chin during the first three days after the operation, but not the slightest uneasiness. In this way the case progressed; the gum healed in a few days; the jaw united strongly, and in the time bones usually unite; and the wearing of the plate was discontinued within six weeks after

The deformity of the jaw being now removed, the next thing to be done was to relieve the confined condition of the head, and the distortion of the face and neck resulting therefrom. This I determined to accomplish, if possible, after the manner recommended by Prof. Mütter in similar cases; and I accordingly per-

formed this operation on the 31st day of July, assisted by Dr. Frissell.

I began by dividing the skin immediately in front of the neck, about half an inch above the sternum—and then carried the incision back about three inches on each side. I then commenced a careful division of the strictures, which were so thickened in front as to extend to the trachea, and on the sides, as not only to involve the platysma-myodes, but a portion of the sterno-cleido-mastoideus muscles also. After dividing every thing that interfered with the raising of the head, and the closing of the mouth, so far as the incision was now made, it became evident that, to give free motion to the head, the incision on the neck must be extended back through the remaining cicatrix, which was at least two inches wide on one side, and about an inch and a half on the other; this was accordingly done, the whole presenting a wound upwards of nine inches in length, and nearly five in width. A thin piece of leather was now cut in the shape of the wound, but somewhat larger, and placing it upon the shoulder and arm, immediately over the deltoid muscle, a flap nearly ten inches in length, and five in breadth, having a neck or attachment two inches wide, was marked out and then dissected up as thick as the parts below would permit. This flap was now brought around, and secured in the wound on the neck by the twisted sutures; the sutures were placed about an inch and a half apart; between each of these sutures, one, two and sometimes three small stitches were inserted, depending entirely upon the number necessary



to bring the edges neatly together. These stitches were of fine thread—had a very superficial hold, produced little or no irritation, and served to keep the parts in better apposition than any other means I could have devised. The wound on the shoulder was next drawn together about one-half of its entire extent; the remainder was covered with lint. One long narrow strip of adhesive plaster, applied around the neck to support the flap, and over this a cravat tied in the usual way, constituted all the dressing deemed advisable at this time.

The patient bore this tedious and very painful operation with great fortitude, and without uttering scarce a murmur. She was somewhat exhausted, but not from loss of blood; there was no vessel divided of sufficient importance to require a ligature.

August 1st.—During the fore part of last night the patient was somewhat distressed—was very unmanageable—would talk incessantly, and occasionally sat up in bed. An anodyne was administered at 12 o'clock, after which she rested much better, and slept some. Complains of sickness of the stomach this morning—has vomited three or four times; flap very pale; pulse rather weak. Patient directed to refrain from taking all kinds of drink.

2d.—Patient complains of pain only in the shoulder; was much distressed the latter part of last night on account of a retention of urine. The catheter was employed, and about three pints of urine drawn off, after which she rested well. Pulse somewhat excited; flap better color.

3d.—The patient rested well last night—the use of the catheter still necessary. All efforts to keep the patient from talking and moving unavailing; color of the flap rather pale, save at the extreme point, and about two inches along the lower edge, which is assuming rather a dark blue color; pulse about the same as yesterday. Removed a pin from near the point of the flap, and enveloped the neck in cotton batting. Patient complains of hunger—chicken broth ordered.

4th.—Patient rested well; the use of the catheter still necessary; complains of slight head-ache; the color of the flap nearly natural, and even the point is assuming a healthy hue, and appears to be united; pulse almost natural.

5th.—Urines without difficulty; bowels moved by injection; patient entirely free from pain; pulse natural.

6th.—Dressing removed; the flap is united by the first intention, along both sides, throughout its entire extent; the greater part of the pins and stitches removed.

7th.—The remainder of the pins and stitches removed; patient perfectly comfortable and cheerful.

10th.—Sat up all day by the window.

15th.—Walked out to take an airing.

During the whole progress of the cure there was not the slightest swelling or undue inflammation in the flap or about the neck. The patient was slightly hysterical the first few days, but never complained of any thing except pain on the shoulder, a slight head-ache of a few

hours' duration, and the uneasiness occasioned by the retention of urine. The wound on the shoulder granulated rapidly, and skinned over in about six weeks after the operation. It was curious to observe that upon touching the flap after it had healed in the neck, the patient would always refer the sensation to the shoulder or arm from which the flap was taken.

The confinement of the head and distortion of the face occasioned by the strictures, being now removed, the next step was to relieve, as far as possible, a very great deformity of the under lip.

The under lip, from being dragged down and greatly stretched by the former projection of the under jaw, was rendered much too large—so much so that it pouted out an inch or more further than the upper lip. This, together with a turning out of the mucous membrane on the left side, which extended nearly down to the lower edge of the chin, making the lip too short on that side, was the nature of the deformity yet to be relieved.

To relieve this unseemly appearance of the lip, the inverted portion was cut out in a V shape, extending down to the flap in the neck, and sufficiently large to reduce the lip to the proper size. The edges were then brought together and secured after the manner of a single hare-lip. The wound healed in the most satisfactory manner—the appearance of the lip was greatly improved, but still there remained a deep depression or notch in the edge, sufficiently large to keep exposed the tops of two or three teeth, besides preventing the coming together of the lips on that side. I now determined to raise if possible, this depressed portion of the lip, and for this purpose passed a bistoury through the lip, about two lines from the free edge, first on one side of the depression, and then on the other, and then carried the incisions downward, to meet at a point on the lower edge of the chin, as represented in Fig. 5.

Fig. 5.



The depressed portion of lip now lying between the two incisions was next dissected loose from the jaw, and then raised on a level with the remainder of the lip, and there retained by pins, after the manner of dressing a double hare-lip.—the line of union forming the letter Y. (See Fig. 6.)

Fig. 6.



This operation was as successful as the others, and the original deformity being now removed, the young lady, though still carrying evidences of the burn, has the free use of her head, eye-lids, jaws and lips, and may mingle in society without particular note or remark. (Fig. 7 represents the patient before either of the operations were performed; Fig. 8, her appearance three weeks after the last operation.)



Fig. 7.



Fig. 8.



The drawings of the first four cuts, accompanying this report, were procured through wax impressions of the mouth, and are therefore exact representations of the position of the teeth, and the manner in which the jaws closed together. The drawing of the last four cuts were taken from Daguerreotype likenesses. The Daguerreotype process, it is well known, *reverses the sides of the face*, and having neglected to direct the attention of the engraver to this fact, these cuts, though sufficiently faithful to give a very correct idea of the case in all other respects, represent the right for the left side of the face.

*American Journal of Dental Science.*

## OBSTETRICS.

*Prolapsus Uteri during Parturition.* By DR. HARTING.—Called by a midwife to a primipara, Dr. Harting was astonished at finding that, under the influence of strong and continuous pain, the lower half of the pregnant uterus had become propelled beyond the external parts. The os uteri was closed, and so rigid, that the point of the finger was forced through it only with great difficulty. The membranes were not yet ruptured, and the child's knee was felt through them. All attempts at returning the organ only excited great suffering, and induced a bearing down that aggravated the evil. A crucial incision was made into the indurated os, the liquor amnii discharged, the child's knee seized, and delivery gradually accomplished, the midwife supporting the uterus the while. After the removal of the placenta, the uterus was easily returned, and the patient, after having been kept on her back for three weeks, did not find the prolapsus reappear on resuming the erect posture.—*Brit. & For. Med. Chir. Rev. from Medicinische Zeitung.*

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*On Plugging the Vagina with Vulcanized Caoutchouc.* By M. DIDAY.—M. Diday, having a case of *metrorrhagia*, in which the patient had become reduced to almost the lowest point of exhaustion, resolved to avail himself of one of Dr. Gariel's ingenious applications of vulcanized caoutchouc. The apparatus consists of a small bladder of caoutchouc, to which is attached a long tube. Rolled up so as not to exceed the little finger in size, it was passed as deeply into the vagina as possible, and kept there by the end of the finger; it was then inflated through the tube, until the small body which had been introduced almost imperceptibly, acquired a volume constituting a sphere of about 33 centimetres in diameter. The air was retained by tying the tube. No means of retaining it *in situ* were required, and the hemorrhage entirely ceasing, it was removed sixty-four hours after, as easily as introduced, by allowing the air to escape through the tube. Any one who is aware of the pain and uncertainty attending the ordinary mode of plugging the vagina, must agree with M. Diday, that this is a most useful apparatus. Its advantages consist, he adds—1. In its simplicity, and the rapidity with which it may be employed. Thus, it only weighs about half an ounce, is soft and flexible, admitting of being put in the instrument case, and is applied in a few seconds. 2. It causes no pain either during or after its application, and requires no bandage to retain it. 3. It admits before insufflation, of being moulded on the parts to be compressed, and thus can exert compression upon a cavity, however irregular in form. 4. It allows of any degree of diminution or increase of pressure to be made, according to the exigencies of the case. 5. It is impermeable to, and incorruptible by, whatever discharges it comes into contact with, and never loses its elasticity. 6. Distended only to a third or fourth of its natural extensibility, it is just as smooth, and possesses nearly as great a resisting power, as when fully distended. 7. A somewhat larger apparatus would be available



for plugging the cavity of the uterus itself, in hemorrhage after delivery. Moulded on the inner surface of that organ during its state of inertia, as this became recovered from, the air would be gradually let out, and the size of the compressing vessel diminished, *pari passu* with that of the uterine cavity.

Dr. Gariel has availed himself of the remarkable properties of the vulcanized caoutchouc (its unalterability by corrosives, its preservation of elasticity at all temperatures, its great strength, and its resumption of its original size after however great extension) for the construction of a vast variety of surgical apparatus, some of which exhibit great ingenuity. Thus, there are bandages, means for making extension and counter-extension, means of exerting compression from within, as in stricture of the urethra, plugging the nares, plugging the vagina, pessaries, or from without, as in hernia, and other pads. One of the most simple of these is a portable urinal, which is of such trifling size and weight, as to cause no inconvenience or ill appearance. The penis is adapted to the orifice of this, just as the wrist is to the India-rubber band of a glove, and the material being impermeable, no smell issues. When opportunity offers, without displacing the vessel, the patient discharges the collected urine by means of a little cock attached to it.—*Ibid*, from *Gaz. des Hopitaux*.

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*On Diminution of the size of the Child by Regimen and Venesection.* By M. DEPAUL.—M. Depaul, fully appreciating the advantages derivable from the induction of premature labor in contracted pelvis, yet believes that the necessity of doing this may be avoided in certain cases, by submitting the mother to regimen and repeated venesection. His attention was first directed to the subject by hearing M. Moreau, in his lectures, express a favorable opinion upon the feasibility of the procedure, founded upon a case that had occurred to him. M. Moreau had attended a woman in two labors, which were very difficult ones, in consequence of considerable pelvic contraction. Apprised that she had again become pregnant, he submitted her to a severe regimen and repeated venesection, and the result was, that a small living infant passed without any aid. In a later pregnancy, she was not submitted to any regimen, embryotomy was had recourse to, and both mother and child died. M. Moreau has since met with other similar cases; but he believes that when the antero-posterior diameter of the pelvis is less than  $3\frac{1}{4}$  inches (French), or, at most, 3 inches, regimen can only be relied upon as an auxiliary. The influence of feeding on the size of the young, is well known in rural districts and to veterinarians; while in women who reject nearly all their food during pregnancy, the child is often very small. This is also the case with the women that come to the *Maternité* to be confined, after undergoing the greatest privations during pregnancy.

Dr. Depaul relates two cases which have occurred in his own practice. Madame G——, of small stature, and having some degree of contraction of the pelvis from rickets, bore, in 1843, a full-sized, still-born child, after a very difficult labor, and the use of ergot. In 1846, she

was delivered of a large, still born child by the forceps. She conceived again, November 21st, 1847; and although the induction of premature labor had been predetermined upon in the event of another pregnancy, yet she earnestly entreated that a full trial should be given to regimen. Accordingly, from February, her diet was limited to *potages* and vegetables, a little meat once a week, and half a pound of bread per diem; and although a healthy person, with vigorous appetite, she cheerfully submitted to the privation. About 400 grammes of blood were abstracted from her arm in the 3d, 6th, 8th, and 8½th month. She became pale and thin. On the 19th of August, labor commenced, and was rapidly finished. The child was small, weighing only 5lbs. (the two others had each weighed 9lbs.), but cried and did well. The mother now allowing herself a better diet, soon recovered her strength.

The subject of the *second* case had been formerly attended by M. P. Dubois, who, finding a rickety pelvis, contracted to 3 inches, had perforated the child's head. On the present occasion he had recommended the induction of premature labor at the 8th month. Labor-pains, however, set in of their own accord, and the author, summoned in the absence of M. Dubois, brought away a small, living child, by means of the forceps. It weighed 2600 grammes, and the bones of its skull were of remarkable thinness. It was discovered afterwards, that this woman had really gone her full time, having, after various futile attempts at procuring abortion at an early stage, resolved to submit herself to a debilitating regimen. This she commenced at the second month, being then rather stout, and having an excellent appetite; and she throughout continued an almost starvation regimen. At first she was much tormented by epigastric pain and intense thirst, requiring large quantities of water to allay it, and she soon became very thin and feeble; but having become accustomed to her privation, she suffered, during the last three months but little from its continuance. After her confinement, a judicious diet soon restored her strength and flesh, and she was able to suckle her child. This case is therefore more satisfactory than the former, inasmuch as the same end was obtained without resorting to venesection.

The procedure would be justifiable in those cases in which the woman, without having any notable diminution of the pelvis, yet always brings forth, owing to their size, only dead children. In moderate contraction of the pelvis, too, it may be resorted to, and although not available in cases of excessive contraction, it may even here be used as an auxiliary, to delay somewhat longer the period of inducing premature labor, and thus give the child an additional chance of life. During the progress of the case, frequent examination should be made, so that we may ascertain, by the degree of development of the uterus, the mobility of the child, and the abundance of the liq. amnii, how far our success is probable. If from this, we conclude our end cannot be gained, we should resort to artificial means for terminating the pregnancy. It is not desirable to commence the debilitating regimen, prior to the 3d or 4th month, as before that period the development of the fœtus takes place very slowly, and the pregnancy is much more easily



endangered by whatever affects the maternal system. It would, too, be probably better, if the amount of aliments were gradually diminished, so as the more easily to accommodate the system to so painful and so prolonged an experiment. The strong meats should be quite abstained from, and, as a general rule, three fourths of the nutriment should be cut off. Much will depend upon the state of the circulation in guiding our decision as to the employment of venesection.—*Bull. de Thérapeutique, from Brit. and For. Med. Chir. Rev.*

[When we bear in mind, that women who have suffered during their entire pregnancy from excessive sickness (M. Depaul, however, states that some of these do not reject their aliments), and others, whose system has become exhausted by want or disease, yet sometimes bring forth voluminous children, it is evident that M. Depaul's recommendation does not admit of a large generalization. Indeed, with some women, the production of large children seems to be as natural as the possession of any personal peculiarity, and by no means dependent upon the mode of life they adopt. Still, there are cases of deformed pelvis, where it may be of great importance to have a living child, in which the plan is well worthy of a trial; for if, by its agency, a small, living child is born at its full time, its chances of surviving will, doubtless, be very superior to those even of a larger infant prematurely brought forth.]—*Brit. and For. Med. Chir. Rev.*

*Vagitus Uterinus.*—DR. LANDSBERG, in a long article on the hydrostatic test, in Henke's 'Zeitschrift,' relates a case of this which occurred in the person of a stout muscular woman, who continued in strong labor-pains from the Saturday to the Thursday, when the liquor amnii was discharged, and a normal occipital presentation felt. While the author, finding no cause for interference, was counselling patience to a very unruly subject, he and others in the small chamber distinctly heard the voice of the child proceeding from the mother's belly, sounding just as it would if issuing from underneath a covering. It ceased after a-while; and as no progress in the labor seemed to be taking place, Dr. Landsberg delivered the woman with the forceps, of a still-born child, which, however, was soon reanimated. He observes, there was not here the large pelvis which some authors represent as always found in such cases.

He adds, that there thus may occur cases, in which, although it is evident the child has breathed, it becomes difficult or impossible to declare whether respiration commenced *in utero* and became arrested during the progress of birth, or whether it commenced first after birth, and was then obstructed by forcible prevention of the entrance of air into the passages. In most cases, we have evidence of external violence, while *vagitus uterinus* must always be considered a most rare occurrence, happening for the most part, only in very tedious labors, while clandestine labors are usually very rapid ones, the child meeting its death then from blows, falls, or other injury. As a general rule, we may say that *vagitus uterinus* can be supposed to have occurred only—1, When the labor has been very tedious; 2, When the liquor amnii

has been long discharged; 3, When there are no objective signs of violence having been employed upon the child; 4, When none of the signs of the accidents are present which commonly result from a tedious labor, especially apoplexy. Dr. Landsberg, however, quotes a case related by Zitterland (Henke's Zeitschrift, 1823, p. 237), in which the child is stated to have cried long and distinctly before the least signs of labor came on, the first pains, and the opening of the os uteri not taking place until the following day. The child was still-born, but restored to life.

Two other cases, besides the one quoted in our last, have been recently published. One of these occurred to Dr. Falkenbach, who, during the operation for turning for a cross-birth, and while the child was undoubtedly entirely within the uterus, heard it cry loudly several times, as did other persons in the room. The other case, too, related by Dr. Koehler, occurred during the attempt to bring down a second foot in turning. The tone of voice was just like that peculiar one uttered by the new-born child, but somewhat duller, as though the child were in a cellar or lower apartment. It continued crying at intervals for two or three minutes. After this, the delivery was accomplished quickly, until the shoulders arrived in the pelvis, which was rather narrow, while the child was a large one. Both they and the head passed through with great difficulty, and the child was born dead, beyond recovery. The child's cries, while *in utero*, were heard by three other people in the room, as well as by the midwife, who was hard of hearing. The chest was examined twenty-four hours afterwards, and was found to be well expanded. The convexity of the diaphragm upwards was less than in the foetal state. Although the lungs did not completely fill the cavity of the chest, they did so to a considerable extent, in part covering the pericardium. The lungs, heart, and a very large thymus gland were removed, and, being placed unseparated in a small vessel of cold water, swam completely. The lungs were of a bright red, with here and there some blueish spots. On incision they crepitated, and some foam and a little blood flowed out. When cut under water, large air-bubbles rose to the surface, and when divided into small portions, each of these swam. The air-cells of the periphery had alone not become completely filled with air, whence the blueish spots found there; but still, not the smallest portion of the structure sank.—*Henke's Zeitschrift, Suppl.*

[This last case is certainly one of high interest in reference to the inferences to be drawn from the application of the hydrostatic test. A train of circumstances can be easily imagined, which might have led to an unjust charge of infanticide, if this test possessed the judicial authority which it once did.—*Ibid.*